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# DISCHARGE MONITORING REPORT (DMR) EVALUATION

Permit No.:	18.50 A533	Permittee: (1)	aimanalo.	Hulch Souder
Date of Report:	. 8078 BC14:	Type of Report:_	DMR	
			3/2/2001-	311/2008 DM4

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ITEM	EVALUATION	RECOMMENDATION
Effluent Limit	TSS 620 mg/L vs 100 mg Fe 53 vs. 1 mg/L Zh 0.099 vs. 0.022 h	1/L Site inspection  3/L
Monitoring		
Progress		
Other		

CWB-6/99 (dmrfmt)

Ø88825



#### WASTE MANAGEMENT

92-460 Farrington Hwv. Kapolei, HI 96707 (808) 668-2985 (808) 668-1366 Fax

April 28, 2008

2008 APR 30 11:04AM

Director of Health
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

Attention:

Ms. Kris Poentis, Engineering Section

Subject:

Annual Discharge Monitoring Report and Storm Water Results, Waimanalo

Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii, File No. HI R50A533

Dear Ms. Poentis:

On behalf of the City & County of Honolulu, Waste Management of Hawaii (WMH) submits annual storm water monitoring results, including the Discharge Monitoring Report (DMR), for the Waimanalo Gulch Sanitary Landfill for the monitoring period of March 2, 2007 through March 1, 2008.

The sampled storm event commenced at approximately 1330 on February 7, 2008. Storm water entered the first detention pond from the concrete channel at approximately 1500; the second detention pond began to fill at approximately 1645. Discharge from the outfall was observed beginning at approximately 1845. A composite sample consisting of 4 aliquots was collected at 15 minute intervals between 1900 and 2000. The onsite weather station recorded no rainfall the previous 3 days (72 hours) prior to February 7, 2008 and 0.92 inch of rain during the day of that storm event. The Storm Water Sampling Form and Field Information Form are presented as Attachment A and Attachment B, respectively, and provide the details of the storm water sampling event. Laboratory results, including quality assurance/quality control data are included as Attachment C.

As indicated on the attached DMR form (EPA Form 3320-1) (Attachment D), there were three analytes (total suspended solids, total recoverable iron, and total recoverable zinc) that exceeded their discharge limitations per the Notice of General Permit Coverage (NGPC), dated March 2, 2005. The required verbal notification of these exceedances was made to the Hawai'i, State Department of Health, Clean Water Branch (DOH CWB) on February 25, 2008. The required written notification regarding the exceedances was submitted to the DOH CWB in a letter dated March 3, 2008. A copy of this document is included as Attachment E. Corrective actions to be implemented as a result of the exceedances are presently being evaluated by WMH. These

measures will be presented in the Storm Water Pollution Control Plan that is currently being updated.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,

Joseph Whelan General Manager

Waste Management of Hawaii

Jreph R. W. Kelan

Enclosures: Attachment A – Storm Water Sampling Form

Attachment B – Field Information Form Attachment C – Laboratory Reports

Attachment D - Discharge Monitoring Form

Attachment E - Written Notification of Exceedance

cc: Wayne Hamada - City and County of Honolulu

Eddie Pettit – WMI Justin Lottig – WMH

Michelle Mason - Earth Tech, Project Manager

250A533

### DEPARTMENT OF ENVIRONMENTAL SERVICES

# CITY AND COUNTY OF HONOLULU

REFUSE DIVISION

1000 ULUOHIA STREET, SUITE 212, KAPOLEI, HAWAII 96707 TELEPHONE: (808) 692-5358 ● FAX: (808) 692-5402 ● WEBSITE: http://www.co.honolulu.gov nakan ata

MUFI HANNEMANN MAYOR



ERIC S. TAKAMURA, Ph.D., P.E. DIRECTOR

FRANK J. DOYLE, P.E.

IN REPLY REFER TO: RD 07-011

Ms. Ann Teruya, Enforcement Section Clean Water Branch Environmental Management Division State Department of Health 919 Ala Moana Boulevard, 2<sup>nd</sup> Floor Honolulu, Hawaii 96814

Dear Ms. Teruya:

Subject:

Submittal of Annual Storm Water Report

Waimanalo Gulch Sanitary Landfill

File No. HI R50A533

In accordance with the Waimanalo Gulch Sanitary Landfill NPDES Permit, HI R50A533, dated March 2, 2005, the attached annual report is submitted for the period beginning March 2, 2006, and ending March 1, 2007. No sampling of storm water runoff occurred during the monitoring period due to the absence of qualified storm events. To assist our monitoring efforts, an environmental consultant is being retained to provide monitoring and sampling capabilities. If you have any questions, please call me at 692-5403.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gather and evaluate the information submitted. Based on myinquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief; true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

WAYNE Y. HAMADA, P.E.

Disposal Operations Engineer

Attachment

CC:

WMH-Suzan Pankenier

WM - Eddie Pettit

Earth Tech - Michelle Mason

07-8599

# ANNUAL STORM WATER REPORT 2006-2007

A A A REST OF THE REST OF

# Waimanalo Gulch Sanitary Landfill 92-460 Farrington Highway Kapolei, Hawaii 96707

### Prepared for:

Waste Management of Hawaii 92-460 Farrington Highway Kapolei, Hawaii 96707

### Prepared by:

Earth Tech, Inc. 841 Bishop Street, Suite 500 Honolulu, Hawaii 96813

April 2007



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ACRONYMS AND ABBREVIATIONS

BMP best management practice

CCH City and County of Honolulu

CMP corrugated metal pipe

CWB Clean Water Branch, Hawaii Department of Health

DMR Discharge Monitoring Report

DOH Department of Health, State of Hawaii

HAR Hawaii Administrative Rules
HDPE high-density polyethylene

mg/L milligram per liter
msl meal sea level

MSW municipal solid waste

NGPC Notice of General Permit Coverage

NPDES National Pollutant Discharge Elimination System

RCP reinforced concrete pipe

SWMP Surface Water Management Plan SWPCP Storm Water Pollution Control Plan

TSS total suspended solids

U.S. United States

WGSL Waimanalo Gulch Sanitary Landfill
WMH Waste Management of Hawaii



### 1.0 INTRODUCTION

This Annual Storm Water Report (Annual Report) summarizes the activities conducted at the Waimanalo Gulch Sanitary Landfill (WGSL) for the period of March 2, 2006 through March 1, 2007, as required by the site's Notice of General Permit Coverage (NGPC) File No. HI R50A533 (dated March 2, 2005). The NGPC is regulated under the National Pollutant Discharge Elimination System (NPDES) program. A copy of the current NGPC is presented in Attachment A.

The WGSL is owned by the City and County of Honolulu (CCH) and operated by Waste Management of Hawaii, Inc. (WMH), a subsidiary of Waste Management, Inc. Under the WGSL's NGPC, the CCH, Department of Environmental Services is authorized to discharge storm water runoff associated with industrial activity at the WGSL to the receiving State water named the Pacific Ocean, a Class A Marine Water, at coordinates 21°00'04"N and 158°07'35"W. The activities associated with the WGSL NGPC are described in the WGSL Storm Water Pollution Control Plan (SWPCP) (Earth Tech 2006). The purpose of the SWPCP is to describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with the activities conducted at the WGSL, and to assure compliance with the State of Hawaii Department of Health (DOH) Hawaii Administrative Rules (HAR) Title 11, Chapter 55, Water Pollution Control.

In 1972, Congress created the NPDES permit program, which set the direction of water pollution control in the United States (U.S.). The DOH has been delegated NPDES permitting authority by the U.S. Environmental Protection Agency. On October 29, 1992, the DOH put rules into effect to implement the storm water program in the HAR Chapter 11–55.

#### 1.1 ANNUAL REPORT CONTENTS

In accordance with the NGPC and HAR Chapter 11-55 Attachment B, an annual report is required and submitted annually to the DOH Clean Water Branch (CWB). As part of this report, annual storm water discharge sampling results are recorded on a Discharge Monitoring Report (DMR) form (Form OMB No. 2040-0004). The DMR for this reporting period is presented in Attachment E. In addition to the DMR, this annual report includes the following sections:

- 4.0 Storm Water Discharge Sampling Results and Discussion;
- 4.1 Evaluation of the SWPCP and the Best Management Practices (BMPs); and
- 4.2 Monthly Inspection Documentation;

#### 2.0 SITE INFORMATION

The WGSL is located at 92-460 Farrington Highway in Kapolei, on the southwest side of the island of Oahu, Hawaii. The site is approximately 15 miles northwest of Honolulu International Airport and two miles southeast of Nanakuli. The facility occupies a portion of a rugged, southwest-sloping coastal canyon (Waimanalo Gulch) and extends approximately 1.2 miles up-canyon (northeast) from Farrington Highway. At its nearest point, the WGSL is approximately 800 feet from the Pacific Ocean. The landfill office and scale house are located at the southern end of the facility, near Farrington Highway. The site location and topography are shown on Figure 1.

### 2.1 SITE SIZE, ELEVATION, AND LIMITS

The WGSL property encompasses a total of 198.6 acres. The site is long and narrow, approximately 7,000 feet in length, with a width ranging from 820 feet on the Farrington Highway frontage to about 1,900 feet at the widest point. The landfill entrance at Farrington Highway is approximately 60 feet above mean sea level (msl), and the extreme northeast corner of the property is at an elevation of 990 above msl. The natural terrain of the WGSL slopes upward from approximately 8 percent at the lower end, to approximately 18 percent at the upper end of the property. The existing landfill area is depicted on Figure 2.



Currently, 78.9 acres of the property are permitted for landfill activities, of which, approximately 58.9 acres are designated for non-hazardous municipal solid waste (MSW) disposal and 20 acres are designated and developed as a monofill for the disposal of non-hazardous MSW incinerator ash (combustion residue) from the Honolulu Program of Waste to Energy Recovery plant. The ash monofill occupies the lower (southern) portion of the WGSL, while the MSW unit occupies the topographically higher (northern) portion of the site.

#### 3.0 STORM WATER MANAGEMENT AND CONTROL

Storm water at the WGSL site is managed by controlled grading on the surface of the landfill and by maintaining an engineered system of drainage ditches and culverts, downchutes, risers, drainage pipes, inlets and outlets, channels, and basins (see Figure 2). Improvements and additions to the site's drainage system were implemented in late 2006 to improve the control of surface water, reduce erosion, and reduce the deposition of sediment into surface water. These engineered controls were put in place to:

- Prevent run-on of surface water to the active disposal area.
- Minimize erosion in all areas of the site.
- Maintain roads and other ancillary facilities in useable condition under all weather conditions.
- Prevent excessive run-off or sedimentation impacts to neighboring properties.
- Prevent contact water (i.e., water that contacts refuse on active portions of the landfill) from leaving the active area.

Storm water discharges from the site from two outfall locations that originate at the site's sedimentation basin, located in the southwestern corner of the site (see Figure 2). These locations include, WGSL-DB01W and WGSL-DB01E, where W denotes the western outfall and E the eastern outfall (see Figure 2). The outfall pipes are 42-inch diameter corrugated metal pipe (CMP), connected to two 48-inch vertical reinforced concrete pipe (RCP) inlet risers that were upgraded with new angled trash racks and are now supported by an aggregate gravel base. When storm water is discharged from the site, an annual grab sample is collected from one of the sedimentation basin outfalls, in compliance with the site's SWPCP. It is important to note that storm water generated in the canyon area above the landfill also flows to the concrete-lined channel along the western edge of the landfill and down to the sedimentation basin. Although not required, samples are occasionally collected from the up-canyon area of the landfill.

In accordance with the permit coverage, the storm water control system is inspected, maintained, and upgraded, as necessary per the site's NGPC and SWPCP. Sediment that has accumulated in the sedimentation basin is removed at least once each year. The most recent removal of sediment occurred in December 2006.

The concrete-lined drainage channel is also routinely inspected and cleaned out, as needed. This routine cleaning is conducted in order to remove any sediment that may have accumulated in the channel.

### 3.1 New Surface Water Management Measures

The construction of new surface water management features at the WGSL, as discussed in the revised SWMP (Earth Tech 2006), began in August 2006. The majority of the improvements made to the drainage system at the WGSL were completed by November 2006. An additional drainage outlet was constructed in March 2007, in the lower ash monofill area, on top of the front stability berm.

The upper portion of the main haul road was re-graded and lined with gravel to reduce sedimentladen run-off from the road surface. The existing drainage swale, located adjacent to the main haul road, was modified in size to better convey surface water run-off from the upper areas of the landfill.



The drainage swale is now rock-lined to reduce surface run-off velocities and to increase sediment control.

Drainage inlets and downdrain pipes have been placed at appropriate intervals along the swale to convey run-off down the slope to the concrete-lined drainage channel, located on the western perimeter of the WGSL facility. Six (6) drain inlets ranging in diameter from 15 inches to 24 inches were constructed along the main haul road. Gravel check dams were also installed at the drainage inlet locations to reduce flow velocities and potential over-flow along the length of the drainage swale. Geotextile material is placed along the edge of the concrete-lined drainage channel. This measure eliminates storm water contact with landfill cover material, thus reducing sediment accumulation in the concrete-lined drainage channel.

A large stability berm is currently being constructed in the vicinity of MSW Cells 8 and 9, which has resulted in a portion of the concrete-lined channel being filled with rock material. Storm water conduits were installed through the berm because the construction of the berm over the drainage channel altered surface water drainage and flow patterns. Drainage swales lined with geomembrane were also constructed to properly convey storm water flow in this area.

A rock-lined swale at the toe of the western slopes of the landfill was built to contain and control increased run-off. This rock-lined swale reduces water flow velocities and conveys the run-off from the covered slopes to the existing concrete channel west of the landfill. In addition, a silt fence was added to the outside edge of the toe swale to further contain surface water.

To establish vegetation, which reduces erosion and the deposition of sediment in surface water, the slopes of the ash monofill and select portions of the MSW landfill were hydroseeded.

A new culvert containing two (2) 36-inch high-density polyethylene (HDPE) double-walled pipes was built to collect run-off from the eastern portion of the landfill area and run-on from portions of the east property, and convey the water to an inlet location along the MSW Cell E-1 hillside. This culvert is grouted with the top portions of the rock left exposed to help reduce velocities of the run-off. It then conveys storm/surface water run-off under the landfill haul road and over the ash monofill area (in two 36-inch surface mounted HDPE pipes) to the western concrete drainage channel. The conveyed run-off outfalls into the detention pond from the concrete drainage channel. A 30-foot-long energy dissipater, consisting of 18-inch to 24-inch rocks, was constructed at the base of the drainage channel to reduce water velocity as it enters the basin, and to reduce scouring and sediment loss in the area.

A rock berm was constructed in the center of the sedimentation basin to help detain initial storm water run-off entering the basin in a pre-holding area, and to reduce the amount of sediments and particulates that flow to the 48-inch RCP inlet risers.

These two 48-inch risers have been connected to the existing 42-inch CMP outfall pipes through a reinforced concrete vault. The gravel support berms, which existed around the inlet riser pipes, have been removed. A subdrain system has been installed within the basin which helps to convey low water flows into the basin and helps prevent ponding for extended periods of time. Additionally, the organic matter, vegetative growth, and sediment deposits within the concrete channel have been removed and restored to original flowline condition. This structure will be inspected and cleared as necessary.

# 4.0 STORM WATER DISCHARGE RESULTS AND DISCUSSION

The WGSL received approximately 25 inches of rainfall during the 2006-2007 reporting period, based on an on-site rain gauge. Storm water sampling was conducted at the WGSL on March 30, 2006 by Earth Tech personnel as a confirmation of the March 1, 2006 exceedances (analytical results from the March 1, 2006 sampling event indicated that concentrations of iron and zinc slightly exceeded the benchmark level listed in the WGSL's NGPC [Per HAR Chapters 11-55, Appendix B,



WMH staff notified Mr. Matthew Kurano of the CWB of storm water exceedances on March 29, 2006]). A total of two confirmation samples were collected on March 30, 2006; one from the western sedimentation basin discharge pipe (WGSL-DB01W) and one from the top of the concrete-lined drainage channel (up-canyon) (WGSL-UPRCHNL01). The storm water samples were collected following forty consecutive days of rain in the spring of 2006. Because these are confirmation samples of the March 1, 2006 sampling event, they were collected in a similar manner as those collected on March 1. Therefore, these two confirmation samples were not collected in accordance with permit conditions (not preceded by 72 hours of dry conditions and not collected as composite samples) and serve only informational purposes.

The analytical results for the grab sample collected from WGSL-DB01W and the grab sample collected from up-canyon, WGSL-UPRCHNL01, are presented in Table 1. The summary of the March 30, 2006 sampling event, the laboratory analytical report, a storm water event form, and field notes are provided in Attachment A, Attachment C, and Attachment D, respectively. The DMR for the current reporting period is presented in Attachment E.

Laboratory analytical results from the confirmation samples collected on March 30, 2006 indicated that concentrations of iron, zinc, and total suspended solids (TSS) in both the up-canyon sample and the outfall sample exceeded the effluent limitations listed in the WGSL's NGPC (see Table 1). Per HAR Chapters 11-55, Appendix B, WMH verbally notified Mr. Matthew Kurano of the CWB of storm water exceedances on April 27, 2006. The concentrations of iron and zinc in both the up-canyon sample and the storm water discharge sample are likely indicative of naturally occurring background constituents originating from surrounding volcanic soils and basalt. In addition, the up-canyon sample indicated lower pH than the NGPC effluent limit for site discharge (see Table 1).

Table 1: WGSL Storm Water Sampling Analytical Results from March 30, 2006 Confirmation Sampling

Parameter (units) /Method No.	Up-canyon	Sedimentation Basin	Effluent Limitation
Flow (gallons) <sup>a</sup>	N/A	1,367.03	No limitation at this time
BOD (mg/L) / E405.1	5.1	6,1	No limitation at this time
COD (mg/L) / E410.4	17 B	19 B	No limitation at this time
TSS (mg/L) / E160.2	1,000 Q	1,500 Q	100
Total Phosphorous (mg/L) / E365.3	0.030 B	0.062	No limitation at this time
Total Nitrogen (mg/L) / E351.2	0.48 B	0.81	No limitation at this time
Nitrate + Nitrite Nitrogen (mg/L) / 353.2	0.29	0.62	No limitation at this time
O&G (mg/L) / E1664A	1.9 B	15	15
pH / E150.1 (Standard Units)	7.24	7.67	7.6-8.6
Total Recoverable Iron (mg/L) / E200.7	56.0	120.0	1.0
Total Recoverable Zinc (mg/L) / E200.7	0.063	0.330	0.022 <sup>b</sup>
Ammonia as N (mg/L) / E350.1	0.27	0.20	10 <sup>b</sup>
Alpha Terpineol (mg/L) / E625	ND	ND	0.033 <sup>b</sup>
Benzoic Acid / E625	ND	ND	0.12 <sup>b</sup>
p-Cresol c (mg/L) / E625	ND	ND	0.025 <sup>b</sup>
Phenol (mg/L) / E625	ND	ND	0.026 <sup>b</sup>

Results in bold italics indicate an exceedance of Effluent Limitation specified in the NGPC.

Notes: Sample Collected March 30, 2006. All samples collected were grab samples.

N/A Not available mg/L milligram per liter

B Estimated result; result is less than reporting limit
ND Not detected at or above reporting limit indicated in ( )

Elevated reporting limit. The reporting limit is elevated due to high analyte levels

<sup>a</sup>Gallons reported in gallons per minute

<sup>b</sup>Effluent Limitation presented is a daily maximum value

<sup>c</sup> p-Cresol reported by analytical laboratory as 4-Methylphenol



Throughout the 2006-2007 reporting period, monitoring of potential storm events took place on a daily basis in anticipation of collecting storm water samples during a significant storm event. Storm monitoring field notes are contained in Attachment D. On January 8, 2007, a significant storm system was tracked by Earth Tech personnel. Once it was confirmed that the WGSL was receiving heavy rains, the storm water sampling team was mobilized for storm water sampling. However, the rain showers became intermittent and the storm water sampling team de-mobilized. Data from the on-site rain gauge at the WGSL reported 0.63 inches of rain on January 8, 2007. Storm water accumulated in the first half of the sedimentation basin but did not flow over the rock check dam (in the center of the basin) or discharge off-site. To date, no significant storm event has occurred since January 8, 2007.

The WGSL discharges storm water off-site through three circular CMPs that travel under Farrington Highway and outfall to the Pacific Ocean. The outfalls for two other square CMPs (Ko'Olina discharge points) are located adjacent to the WGSL CMP outfalls. Photos were taken of all the CMPs on January 8, 2007 (see Attachment F). The photos presented in Attachment F indicate that no storm water discharged from the WGSL during this significant rain event.

On January 9, 2007, Earth Tech contacted Mr. Alec Wong of the DOH CWB regarding the sampling protocol for this particular storm event (see Attachment I). Mr. Wong stated that a waiting period of 72 hours of dry weather following the last significant storm was not necessary if no storm water was discharged from the sedimentation basin. To date, no significant storm event has occurred since January 8, 2007.

## 4.1 EVALUATION OF THE SWPCP AND THE BMPs

The conditions of the NGPC require that the SWPCP be reviewed and updated annually. The SWPCP that was submitted to the DOH CWB in August 2005 (Earth Tech 2005) was revised and resubmitted to the DOH CWB in September 2006. Any additional revisions to the WGSL SWPCP will be provided to the DOH CWB in an update log (Attachment H).

The WGSL SWMP (Earth Tech 2006) was also revised and submitted to the DOH Solid and Hazardous Waste Branch in September 2006 for review and comment. The SWMP is a requirement of the WGSL's solid waste permit. The purpose of the SWMP is to describe and ensure the implementation of surface water management practices to prevent run-on and control run-off from a 25-year, 24-hour storm event. As part of the SWMP evaluation, Earth Tech conducted an annual site inspection on June 20, 2006 to determine the condition of existing drainage system conveyance and erosion and sediment controls (Earth Tech 2006). The WGSL solid waste permit specifies the following requirements:

- Prevention of run-on and collection and control of run-off from a 25-year, 24-hour storm.
- Prevention of soil erosion and exposure of waste due to soil erosion.
- Prevention of a discharge of pollutants into waters of the U.S., or violation of any requirement of the Clean Water Act or state-wide water quality management plan.

The SWMP discusses specific measures that WMH has proposed, designed, and constructed in order to manage storm water, such as controlled grading on the surface of the landfill and by maintaining an engineered system of drainage ditches, channels, risers, pipes, and basin. The implemented drainage improvements have helped to and will continue to:

- Prevent run-on of surface water to the active disposal area.
- · Minimize erosion in all areas of the site.
- Maintain roads and other ancillary facilities in useable condition under all weather conditions.
- Prevent excessive run-off or sedimentation impacts to neighboring properties.



The measures recommended in the SWMP have been implemented as discussed in Section 3.1. With the implementation of the upgraded drainage system, there was no storm water discharge from the site during the 2006-2007 reporting period after the heavy rains of February-March 2006.

# 4.2 MONTHLY INSPECTION DOCUMENTATION

Monthly site inspections are conducted by WGSL personnel in order to evaluate how the storm water BMPs described in the SWPCP perform. These evaluations include visual observations of the facility for evidence of non-storm water flows or discharges and monitoring/observation of drainage ditches and culverts, landfill cover, and access roads. The monthly site inspections for March 2006 through February 2007 are presented in Attachment G.

Any BMP deficiencies noted on the monthly site inspections are monitored by WGSL personnel until corrective action is complete. Site BMPs will continue to be monitored by site personnel and any deficiencies will be addressed and mitigated in a timely manner.

### 5.0 SUMMARY AND CONCLUSIONS

Storm water sampling was conducted at the WGSL on March 30, 2006 by Earth Tech personnel as a confirmation of the March 1, 2006 exceedances. Because these are confirmation samples of the March 1, 2006 sampling event, they were collected in a similar manner as those collected on March 1. Therefore, these confirmation samples were not collected in accordance with permit conditions (not preceded by 72 hours of dry conditions and not collected as composite samples) and serve only informational purposes. Laboratory analytical results from the samples collected on March 30, 2006 confirm the results of the March 1, 2006 sampling event (concentrations of iron, zinc, and TSS in both the sedimentation basin outfall sample and the up-canyon sample exceeded the effluent limitations listed in the WGSL's NGPC).

New drainage and surface water control features were constructed and implemented on-site at the WGSL in late 2006. As a result of these improvements; no storm water was discharged from the WGSL during the period of April 1, 2006 thru March 1, 2007. Therefore, no qualifying storm water samples were collected. The effectiveness of these new surface water management features were documented during a significant storm event (0.63 inches of rain) that occurred on January 8, 2007. Based on these observations, WMH believes that the WGSL's modified controls will improve discharge from the site to State receiving waters and WMH will take necessary steps to ensure that future storm water sampling events follow the protocol set forth in the site's NGCP.



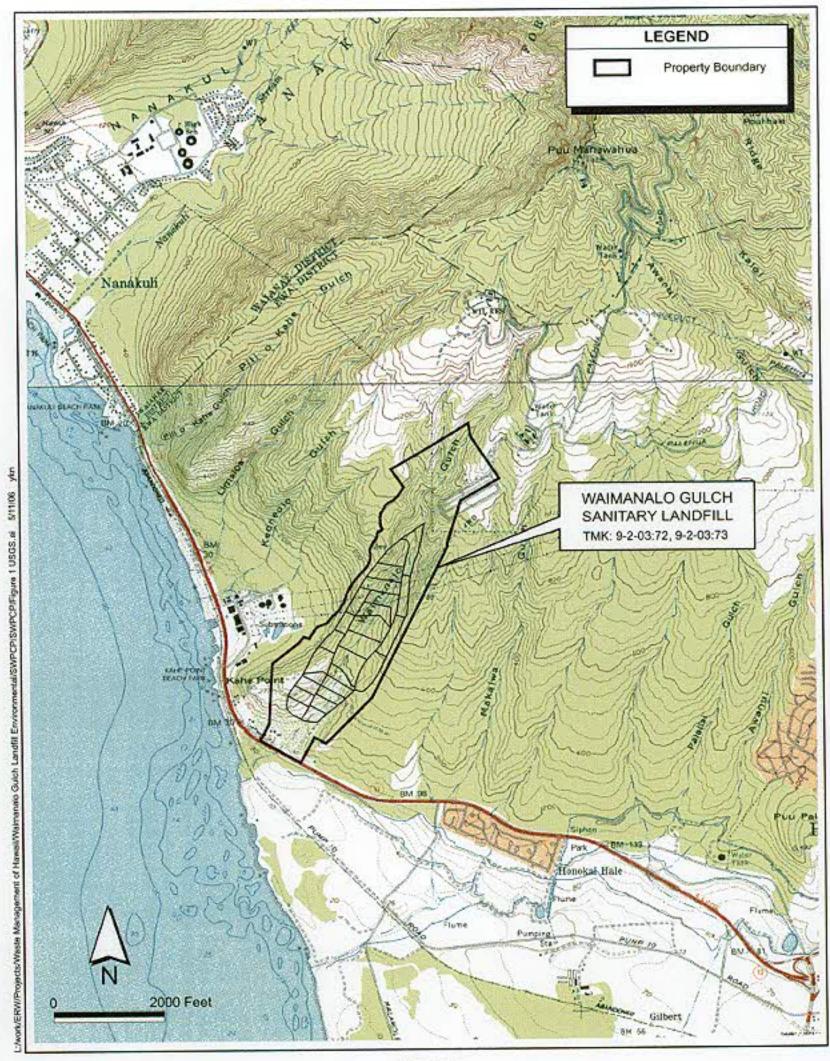
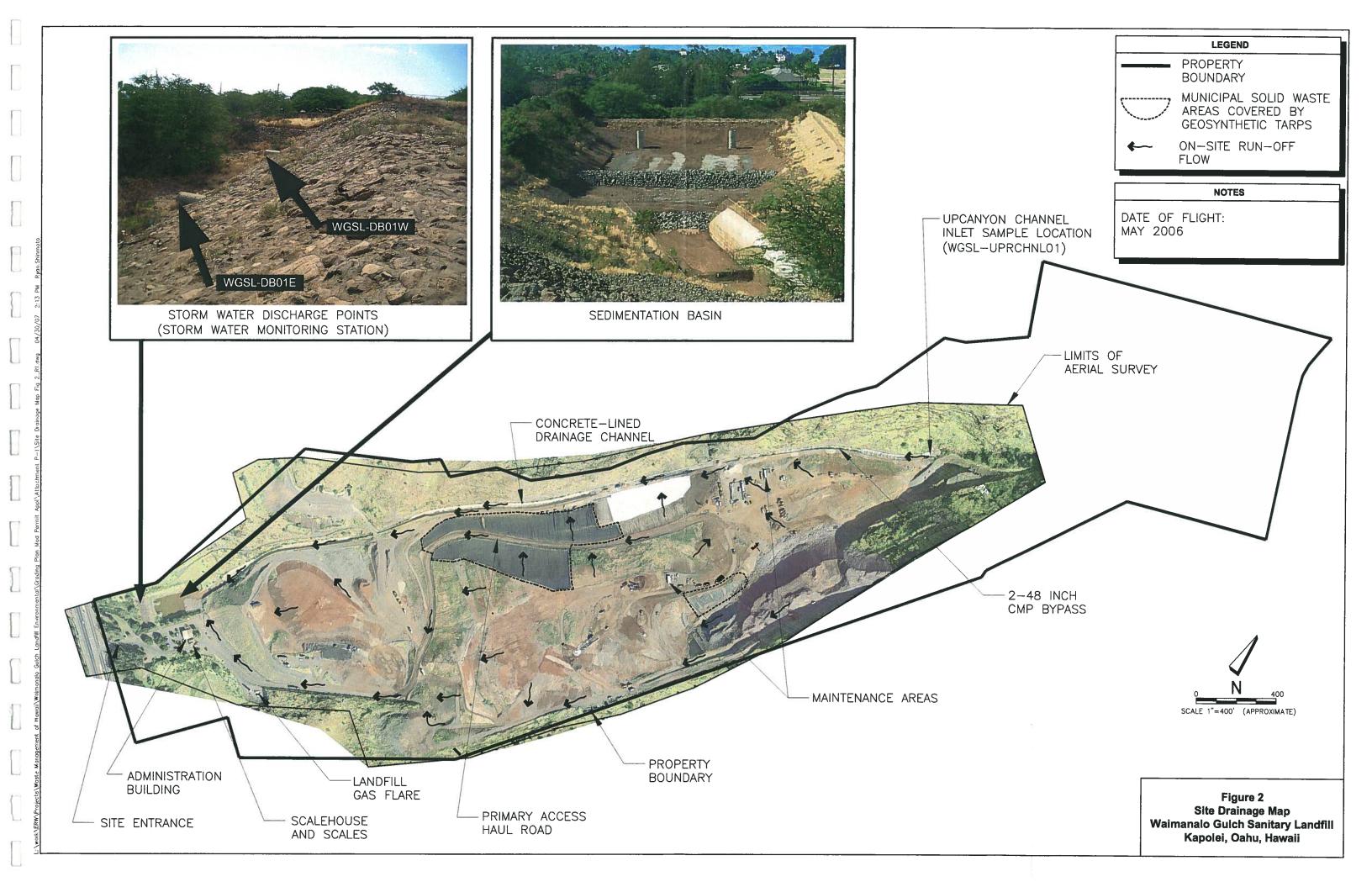


Figure 1 Site Location Map Walmanalo Gulch Sanitary Landfill Kapolei, Oahu, Hawaii



Attachment A NGPC Dated March 2, 2005 LINDA LINGLE GOVERNOR OF HAWAII



STATE OF HAWAII DEPARTMENT OF HEALTH P.O. BOX 3378 HONGLULU, HAWAII 95801-3378

March 2, 2005

CHIYOME L. FURINO, M.D.
DRECTOR OF HEALTH

FARE
ECTOR

R50A533.FNL mailed 3/2/05/19

Dr. Eric S. Takamura, P.E.
Acting Director
Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street, Suite 308
Kapolei, Hawaii 96707

Attention: Mr. Wayne Hamada

Disposal Operations Engineer

Refuse Division

Dear Dr. Takamura:

Subject: NOTICE OF GENERAL PERMIT COVERAGE (NGPC)

National Pollutant Discharge Elimination System (NPDES)

Waimanalo Gulch Sanitary Landfill

File No. HI R50A533

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. § 1251 et seq.; the "Act"); Hawaii Revised Statutes, Chapter 342D; and Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55, Department of Health (DOH), State of Hawaii,

## CITY AND COUNTY OF HONOLULU DEPARTMENT OF ENVIRONMENTAL SERVICES

(hereinafter PERMITTEE)

is authorized to discharge storm water runoff associated with industrial activity from its facility located in Kapolei, Oahu, Hawaii, to the receiving State water named the Pacific Ocean, a Class A, Marine Water, at the coordinates: Latitude 21°00'04"N and Longitude 158°07'35"W.

#### The Permittee shall:

 Comply with HAR, Chapter 11-55, Appendix B, NPDES General Permit Authorizing Discharges of Storm Water Associated with Industrial Activities (enclosed). Dr. Eric S. Takamura, P.E. March 2, 2005 Page 2

- Comply with HAR, Chapter 11-55, Appendix A, DOH, Standard General Permit Conditions (enclosed).
- Comply with HAR, Chapter 11-55, Sections 11-55-34.04(a), 11-55-34.07, 11-55-34.11, 11-55-34.12 (enclosed), and any other sections applicable to the subject activity.
- 4. Comply with all materials submitted in and with the Notice of Intent, dated August 21, 2002.
- 5. Retain a copy of this NGPC and all other related materials at the facility.
- Sample the storm water discharge as described below:

Effluent Parameter (units).	Effluent Limitation (1)	Minimum Monitoring Frequency (2)	Evpe of Sample 1 (3)
Flow (gallons)	{4}	Annually	Calculated or Estimated
Biochemical Oxygen Demand (5-Day) (mg/l)	{4}	Annually	Grab or Composite
Chemical Oxygen Demand (mg/l)	{4}	Annually	Grab or Composite
Total Suspended Solids (mg/l)	100	Annually	Grab or Composite
Total Phosphorus (mg/l)	{4}	Annually	Grab or Composite
Total Nitrogen (mg/l) {5}	{4}	Annually	Grab or Composite
Nitrate + Nitrite Nitrogen (mg/l)	(4)	Annually	Grab or Composite
Oil and Grease (mg/l)	15	Annually	Grab {6}
pH Range (Standard Units)	7.6 - 8.6	Annually	Grab {7}
Total Recoverable Iron (mg/l)	0.1	Annually	Grab or Composite
Ammonia (mg/l)	10 {8} 4.9 (9}	Annually	Grab or Composite
Alpha Terpineol (mg/l)	0.033 (8) 0.016 (9)	Annually	Grab or Composite

Effluent Parameter (units)	Effluent — Limitation — (1)	Minimum Monitoring Frequency (2)	Sample
Benzoic Acid (mg/l)	0.12 {8} 0.071 {9}	Annually	Grab or Composite
p-Cresol (mg/l)	0.025 {8} 0.014 {9}	Annually	Grab or Composite
Phenol (mg/l)	0.026 {8} 0.015 {9}	Annually	Grab or Composite
Total Recoverable Zinc (mg/l)	0.022 (8) 0.022 (9)	Annually	Grab or Composite

mg/l = milligrams per liter = 1000 micrograms per liter

#### NOTES:

- {1} Pollutant concentration levels shall not exceed the storm water discharge limits or be outside the ranges indicated in the table. Actual or measured levels which exceed those storm water discharge limits or are outside those ranges shall be reported to the Clean Water Branch (CWB) required in HAR, Chapter 11-55, Appendix B, Section 10(c).
- (2) "Annually" means once per calendar year.
- (3) The Permittee shall collect samples for analysis from a discharge resulting from a representative storm. A representative storm means a rainfall that accumulates more than 0.1 inch of rain and occurs at least 72 hours after the previous measurable (greater than 0.1 inch) rainfall event.

The Permittee shall analyze the sample collected during the first 15 minutes as a grab sample. If two (2) or more samples are collected, the Permittee shall analyze the samples as a composite sample.

"Composite sample" means a combination of at least two (2) sample aliquots, collected at periodic intervals. The composite shall be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to the total flow of storm water discharge flow since the collection of the previous aliquot. The Permittee may collect aliquots manually or automatically.

- (4) No limitation at this time. Only monitoring and reporting is required.
- {5} The Total Nitrogen parameter is a measure of all nitrogen compounds in the sample (nitrate, nitrite, ammonia, dissolved organic nitrogen, and organic matter, present as particulates).
- (6) The Permittee shall measure Oil and Grease using EPA Method 1664, Revision A.
- {7} The Permittee shall measure pH within 15 minutes of obtaining the grab sample.
- (8) This value is a daily maximum limitation.
- (9) This value is a maximum monthly average limitation.

Dr. Eric S. Takamura, P.E. March 2, 2005 Page 4

- Revise the Storm Water Pollution Control Plan (SWPCP) to include the following information and submit the revised SWPCP within 120 days from the date of this NGPC:
  - Additional Best Management Practices (BMPs) employed at the facility, including the sedimentation basin.
  - Storm water monitoring program in accordance with HAR, Chapter 11-55, Appendix B, Section 6.
- Revise the SWPCP should any discharge limitation or water quality standards established in HAR, Section11-54-4, for salt water be exceeded. The revisions shall include BMPs and/or other measures to reduce the amount of pollutants found to be in exceedance from entering storm water runoff.
- Submit any changes to information on file with the CWB as soon as such changes arise, and properly address all related concerns and/or comments to the CWB's satisfaction.
- 10. Complete and submit the Notice of Cessation (NOC) Form (CWB-NOC Form) to the CWB within two (2) weeks of cessation of industrial activities at the subject facility. The CWB-NOC Form can be downloaded from our website at: <a href="http://www.hawaii.gov/health/environmental/water/cleanwater/forms/pdf/cwb-noc.pdf">http://www.hawaii.gov/health/environmental/water/cleanwater/forms/pdf/cwb-noc.pdf</a>

This NGPC will take effect on the date of this notice. This NGPC will expire at midnight, November 6, 2007, or when amendments to HAR, Chapter 11-55, Appendix B, are adopted, whichever occurs first. Any non-compliance with the conditions of this NGPC may be subject to penalties of up to \$25,000 per violation per day.

The Permittee is responsible for obtaining other Federal, State, or local authorizations as required by law.

If you have any questions, please contact Ms. Kris Poentis of the Engineering Section, CWB, at 586-4309.

Sincerely,

THOMAS E. ARIZUMI, P.E., CHIEF Environmental Management Division

KP:no

Enclosures:

- 1. HAR, Sections 11-55-01 and 11-55-34 to 11-55-34.12
- 2. HAR, Chapter 11-55, Appendices A and B
- Title 40, Code of Federal Regulations Citations as referenced in HAR, Chapter 11-55, Water Pollution Control, Appendix A

Attachment B Analytical Laboratory Report



STL Denver 4955 Yarrow Street Arvada, CO 80002

Tel: 303 736 0100 Fax: 303 431 7171 www.stl-inc.com

### ANALYTICAL REPORT

Project No. Site 995

Waimanalo Gulch Landfill

Lot #: D6D010117

Stormwater

Paul Burns

Waste Management, Inc. Waimanalo Gulch Landfill 92-960 Farrington Highway Kapolei, HI 96707

Cc: Terri Choy, Earth Tech

Severn Trent Laboratories, Inc./STL DENVER

Project Manager

April 20, 2006

# **Table Of Contents**

# Standard Deliverables

# Report Contents

# Total Number of Pages

## Standard Deliverables

The Cover Letter and the Report Cover page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.

- · Table of Contents
- Case Narrative
- Executive Summary Detection Highlights
- Methods Summary
- Method/Analyst Summary
- Lot Sample Summary
- Analytical Results
- QC Data Association Summary
- · Chain-of-Custody

## Case Narrative

Enclosed is the report for two samples received at STL's Denver laboratory on April 1, 2006. The results included in this report have been reviewed for compliance with STL's Laboratory Quality Manual. STL Denver is NELAP approved for all parameters reported.

This report may include data with reporting limits (RLs) less than STL Denver's standard reporting limits. These data and reporting limits are being used specifically to meet the needs of this project. Note that, data are not customarily reported to these levels without qualifiers, because they are inherently less reliable and potentially less defensible than the latest industry standards require. Please contact STL Denver for more details.

Dilution factors and footnotes have been provided to assist in the interpretation of the results. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interferences or analytes present at concentrations above the linear calibration curve, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

STL Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. A summary of quality control parameters is provided below.

This report shall not be reproduced except in full, without the written approval of the laboratory.

# Quality Control Summary for Lot D6D010117

### Sample Receiving

The cooler temperatures upon receipt at the Denver laboratory were 3.2°C and 2.3°C.

The sampling date recorded on the Chain of Custody is 3/20/06. The client was contacted and instructed the laboratory to use the sampling date of 3/30/06.

All sample bottles were received in acceptable condition.

#### **Holding Times**

All holding times were met.

#### Method Blanks

Total Phosphorus Method 365.3 was detected in the Method Blank below the project established reporting limits. Corrective action is not required for any values in Method Blanks that are below the requested reporting limits.

All other Method Blanks were within established control limits.

### Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

### Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 and Method 1664A HEM due to insufficient sample volume, however, LCS/LCSD pairs were analyzed to demonstrate method precision.

The percent recoveries and/or the relative percent difference of the MS/MSD performed on sample WGSL-UPRCHNL01 were not calculated for Total Iron during Method 200.7 analysis because the sample concentration was greater than four times the spike amount.

The Matrix Spike and Matrix Spike Duplicate performed on an unrelated sample exhibited MS and MSD recoveries outside control limits for Total Kjeldahl Nitrogen (TKN) Method 351.2. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

Due to the result concentration exceeding the calibration range, the MS/MSD results for Chemical Oxygen Demand (COD) Method 410.4 are estimated. The COD MS/MSD was performed on an unrelated sample.

All other MS and MSD samples were within established control limits.

### Organics

The Method 625 surrogate recoveries of Terphenyl-d14 and/or 2,4,6-Tribromophenol were outside control limits for the samples WGSL-UPRCHNL01 and WGSL-DB01W. Because the chromatograms show clear evidence of matrix interference for both samples and all other quality control samples met acceptance criteria, no corrective action was performed, and the data were accepted.

STL Denver

# **EXECUTIVE SUMMARY - Detection Highlights**

# D6D010117

PARAMETER		RESULT	REPORTING LIMIT	UNITS	METHOD METHOD
WGS	L-UPRCHNL01 03/30/06 12:30 001				
	55 82			£	
	Iron	56000	100	ug/L	MCAWW 200.7
	Zinc	63	20	ug/L	MCAWW 200.7
	Total Suspended Solids	1000 Q	40	mg/L	MCAWW 160.2
	Total Kjeldahl Nitrogen	0.48 B	0.50	mg/L	MCAWW 351.2
	Nitrate-Nitrite	0.29	0.10	mg/L	MCAWW 353.2
	Biochemical Oxygen Demand (BOD)	5.1	2.0	mg/L	MCAWW 405.1
	Total phosphorus	0.030 B,J	0.050	mg/L	MCAWW 365.3
	HEM (Oil and Grease)	1.9 B	5.0	mg/L	CFR136A 1664A HEM
	Ammonia as N	0.27	0.10	mg/L	MCAWW 350.1
	Chemical Oxygen Demand (COD)	17 B	20	mg/L	MCAWW 410.4
WGS	L-DB01W 03/30/06 13:20 002		RE.		
1	Iron	120000	100	ug/L	MCAWW 200.7
	Zinc	330	20	ug/L	MCAWW 200.7
	Total Suspended Solids	1500 Q	40	mg/L	MCAWW 160.2
	Total Kjeldahl Nitrogen	0.81	0.50	mg/L	MCAWW 351.2
	Nitrate-Nitrite	0.62	0.10	mg/L	MCAWW 353.2
	Biochemical Oxygen Demand (BOD)	6.1	2.0	mg/L	MCAWW 405.1
	Total phosphorus	0.062 J	0.050	mg/L	MCAWW 365.3
	HEM (Oil and Grease)	15	5.0	mg/L	CFR136A 1664A HEM
	Ammonia as N	0.20	0.10	mg/L	MCAWW 350.1
	Chemical Oxygen Demand (COD)	19 B	20	mg/L	MCAWW 410.4

# METHODS SUMMARY

### D6D010117

PARAMETER	ANALYTICAL METHOD	PRBPARATION METHOD
Base/Neutrals and Acids	CFR136A 625	CFR136A 625
Biochemical Oxygen Demand	MCAWW 405.1	MCAWW 405.1
Chemical Oxygen Demand	MCAWW 410.4	MCAWW 410.4
Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7	MCAWW 200.7
N-Hexane Extractable Material (1664A)	CFR136A 1664A H	CFR136A 1664
Nitrate-Nitrite	MCAWW 353.2	MCAWW 353.2
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Non-Filterable Residue (TSS)	MCAWW 160.2	MCAWW 160.2
Total phosphorus	MCAWW 365.3	MCAWW 365.3
Total Kjeldahl Nitrogen	MCAWW 351.2	MCAWW 351.2
A 440 B 40 B 40 B 47 B 40 B 11 B 40 B 11 B 40 B 40 B 40 B 40		

### References:

CFR136A	"Methods for Organic Chemical Analysis of Municipal and
	Industrial Wastewater", 40CFR, Part 136, Appendix A,
	October 26, 1984 and subsequent revisions.

MCAWW "Methods for Chemical Analysis of Water and Wastes", BPA-600/4-79-020, March 1983 and subsequent revisions.

STL Denver

# METHOD / ANALYST SUMMARY

#### D6D010117

ANALYTICAL METHOD	ANALYST	ANALYST ID
CFR136A 1664A HEM	Nathan E. Waldvogle	003369
CFR136A 625	Tamera Ashcraft	009005
MCAWW 160.2	Andrew M. Perlman	008060
MCAWW 200.7	Janel Motichka	2862
MCAWW 350.1	Duane Allee	001470
MCAWW 351.2	Duane Allee	001470
MCAWW 353.2	Claire Likar	004382
MCAWW 365.3	Yupanqui Caldas	000999
MCAWW 405.1	Danielle M. Fougere	006481
MCAWW 410.4	Dusti O. Criqui	006589
References:	55	

CFR136A "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

# SAMPLE SUMMARY

### D6D010117

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP
H2FL4	001	WGSL-UPRCHNL01	03/30/06	
H2FMC	002	WGSL-DB01W	03/30/06	13:20

### NOTE (S):

- The analytical results of the samples listed above are presented on the following pages,
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corresivity, density, flashpoint, ignitability, layers, odor,
   paint filter test, pH, porosity pressure, reactivity, rodox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

# Client Sample ID: WGSL-UPRCHNL01

### GC/MS Semivolatiles

Lot-Sample #:	D6D010117-001	Work Order #:	H2FL41AK	Matrix: WATER
Date Sampled:	03/30/06 12:30	Date Received:	04/01/06	
Prep Date:	04/03/06	Analysis Date:	04/07/06	23
Prep Batch #:	6093503	Analysis Time:	13:59	239

Dilution Factor: 1

Method....: CFR136A 625

		REPORTIN		SAROCEI.
PARAMETER	RESULT	LIMIT	UNITS	MDL
Alpha-Terpineol	ND	10	ug/L	2.0
Benzoic acid	ND	50	ug/L	16
Phenol	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	1.6
	PERCENT	RECOVERY	į.	
SURROGATE	RECOVERY	LIMITS	<u>—</u> 9	
2-Fluorophenol	67	(53 - 12	0)	
Phenol-d5	69	(57 - 12	(0)	
Nitrobenzene-d5	67	(59 - 12	(0)	
2-Fluorobiphenyl	60	(49 - 12)	(0)	
2,4,6-Tribromophenol	70	(50 - 12	(0)	
Terphenyl-d14	58 *	(63 - 12	0)	

Surrogate recovery is outside stated control limits.

## Client Sample ID: WGSL-DB01W

## GC/MS Semivolatiles

Lot-Sample #:	D6D010117-002	Work Order #:	H2FMC1AK	Matrix WATER
Date Sampled:	03/30/06 13:20	Date Received:	04/01/06	
Prep Date:	04/03/06	Analysis Date .	04/07/06	

Prep Date...: 04/03/06 Analysis Date..: 04/07/ Prep Batch #...: 6093503 Analysis Time..: 14:41

Dilution Factor: 1

Method.....: CFR136A 625

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL	
Alpha-Terpineol	ND	10	ug/L	2.0	
Benzoic acid	ND	50	ug/L	16	
Phenol	ND	10	ug/L	1.4	
4-Methylphenol	ND	10	ug/L	1.6	
SURROGATE	PERCENT RECOVE RECOVERY LIMITS				9;
2-Fluorophenol	69	(53 - 120	)		
Phenol-d5	73	(57 - 120	50		
Nitrobenzene-d5	72	(59 - 120			
2-Fluorobiphenyl	55	(49 - 120	)		
2,4,6-Tribromophenol	42 *	(50 - 120			
Terphenyl-d14	60 *	(63 - 120			

NOTE(S):

Surrogate recovery is outside stated control limits.

### Client Sample ID: WGSL-UPRCHNL01

### TOTAL Metals

Matrix....: WATER Lot-Sample #...: D6D010117-001 Date Sampled...: 03/30/06 12:30 Date Received..: 04/01/06 PREPARATION-WORK REPORTING ANALYSIS DATE ORDER PARAMETER LIMIT UNITS METHOD Prep Batch #...: 6094485 04/05/06 H2FL41AL MCAWW 200.7 Iron 56000 100 ug/L Analysis Time..: 18:52 MDL..... 21 Dilution Factor: 1 H2FL41AM

ug/L

MCAWW 200.7

Analysis Time..: 18:52

04/05/06

MDL..... 4.5

zinc

63

20

Dilution Factor: 1

## Client Sample ID: WGSL-DB01W

### TOTAL Metals

Lot-Sample #...: D6D010117-002 Matrix....: WATER

Date Sampled...: 03/30/06 13:20 Date Received..: 04/01/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Iron	: 6094485 120000	100	ug/L	MCAWW 200.7	04/05/06	H2PMCLAL
		Dilution Facto	r: 1	Analysis Time: 19:1	2 MDL	.: 21
Zinc	330	20	ug/L	MCAWW 200.7	04/05/06	H2FMC1AM
		Dilution Facto	r: 1	Analysis Time: 19:1	2 MDL	.: 4.5

### Client Sample ID: WGSL-UPRCHNL01

### General Chemistry

Lot-Sample #...: D6D010117-001 Work Order #...: H2FL4 Matrix....: WATER

Date Sampled...: 03/30/06 12:30 Date Received..: 04/01/06

					PREPARATION-	PREP
PARAMETER	RESULT	RL	UNITS	METHOD	ANALYSIS DATE	BATCH #
Ammonia as N	0.27	0.10	mq/L	MCAWW 350.1	04/12/06	6103302
	0.77-77-770	lution Fact		Analysis Time: 17:00	MDL	.: 0.022
Biochemical Oxygen Demand (BOD)	5.1	2.0	mg/L	MCAWW 405.1	04/01/06	6091081
	Di.	lution Fact	tor: 1	Analysis Time: 10:15	MDL 0.30	
Chemical Oxygen Demand (COD)	17 B	20	mg/L	MCAWW 410.4	04/06/06	6096487
	Di	lution Fact	tor: 1	Analysis Time: 18:00	MDL	.: 4.1
HEM (Oil and Grease)	1.9 B	5.0	mg/L	CFR136A 1664A HE	4 04/06/06	6096396
	Dilution Factor: 1			Analysis Time: 12:00	MDL: 1.4	
Nitrate-Nitrite	0.29	0.10	mg/L	MCAWW 353.2	04/05/06	6096526
	Dilution Factor: 1			Analysis Time: 23:30	MDL	.: 0.019
Total phosphorus	0.030 B,J	0.050	mg/L	MCAWW 365.3	04/10/06	6100550
	ALL STREET, ST	lution Fac	tor: 1	Analysis Time: 23:50	MDL	.: 0.0050
Total Kjeldahl Nitrogen	0.48 B	0.50	mg/L	MCAWW 351.2	04/10-04/11/06	6101533
Microgan	Di	lution Fac	tor: 1	Analysis Time: 17:00	MDL	.: 0.12
Total Suspended Solids	1000 Q	40	mg/L	MCAWW 160.2	04/05/06	6096142
301108	Di	lution Fac	tor: 10	Analysis Time: 12:20	MDL	.: 11

### NOTE (S):

RL Reporting Limit

B Estimated result, Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

# Client Sample ID: WGSL-DB01W

### General Chemistry

Lot-Sample #...: D6D010117-002 Work Order #...: H2FMC Matrix..... WATER

Date Sampled...: 03/30/06 13:20 Date Received..: 04/01/06

PARAMETER	RESULT	RL	UNITS	METHOD	)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Ammonia as N	0.20	0.10	mg/L	MCAWW		04/12/06	6103302
		Dilution Fact	or: 1	Analysis	Time: 00:00	MDL	: 0.022
Biochemical Oxygen Demand (BOD)	6.1	2.0	mg/L	MCAWW	405.1	04/01/06	6091081
(222)		Dilution Fact	or: 1	Analysis	Time; 10:15	MDL	: 0.30
Chemical Oxygen Demand (COD)	19 B	20	mg/L	MCAWW	410.4	04/06/06	6096487
Stranger to Therman	Dilution Factor: 1		tor: 1	Analysis Time; 18:00		MDL 4.1	
HEM (Oil and Grease)	15	5.0	mg/L	CFR136	A 1664A HEM	04/06/06	6096396
		Dilution Fact	tor: 1	Analysis	Time: 12:00	MDL	: 1.4
Nitrate-Nitrite	0.62	0.10	mg/L	MCAWW	353.2	04/05/06	6096526
		Dilution Fact	tor: 1	Analysis	Time: 23:30	MDL	.: 0.019
Total phosphorus	0.062	J 0.050	mg/L	MCAWW	365.3	04/10/06	6100550
A 194		Dilution Pac	tor: 1	Analysis	Time: 23:50	MDL	.: 0.0050
Total Kjeldahl Nitrogen	0.81	0.50	mg/L	MCAWW	351.2	04/10-04/11/06	6101533
		Dilution Fac	tor: 1	Analysis	Time: 17:00	MDL	.: 0.12
Total Suspended Solids	1500 Q	40	mg/L	MCAWW	160.2	04/05/06	6096142
Na adala		Dilution Fac	tor: 10	Analysis	Tine: 12:20	MDL	.: 11

### NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.,

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

# QC DATA ASSOCIATION SUMMARY

# D6D010117

# Sample Preparation and Analysis Control Numbers

	10	ANALYTICAL	LEACH	PREP	
SAMPLE#	MATRIX	METHOD	BATCH #	BATCH #	MS RUN#
001	WATER	MCAWW 160.2		6096142	6097098
	WATER	MCAWW 200.7		6094485	6094289
	WATER	MCAWW 351.2		6101533	6102311
	WATER	MCAWW 353.2	91	6096526	6096306
	WATER	MCAWW 405.1		6091081	6096262
	WATER	CFR136A 625		6093503	
	WATER	MCAWW 365.3		6100550	6102316
	WATER	CFR136A 1664A HEM		6096396	
	WATER	MCAWW 350.1		6103302	6103216
	WATER	MCAWW 410.4		6096487	6096286
002	WATER	MCAWW 160.2		6096142	6097098
	WATER	MCAWW 200.7		6094485	6094289
	WATER	MCAWW 351.2		6101533	6102311
	WATER	MCAWW 353.2		6096526	6096306
	WATER	MCAWW 405.1		6091081	6096262
	WATER	CFR136A 625		6093503	
	WATER	MCAWW 365.3		6100550	6102316
	WATER	CFR136A 1664A HEM		6096396	
	WATER	MCAWW 350.1		6103302	6103216
	WATER	MCAWW 410.4		6096487	6096286

# METHOD BLANK REPORT

# GC/MS Semivolatiles

Client Lot #...: D6D010117

Work Order #...: H2H5B1AA

Matrix....: WATER

MB Lot-Sample #: D6D030000-503

Prep Date....: 04/03/06 Prep Batch #...: 6093503 Analysis Time..: 19:53

Analysis Date..: 04/06/06

Dilution Factor: 1

....

PARAMETER	RESULT	REPORTIN	NG UNITS	METHOD
Phenol	ND	10	ug/L	CFR136A 625
Benzoic acid	ND	50	ug/L	CFR136A 625
4-Methylphenol	ND	10	ug/L	CFR136A 625
Alpha-Terpineol	ND	10	ug/L	CFR136A 625
	PERCENT	RECOVERY		
SURROGATE	RECOVERY	LIMITS		
2-Fluorophenol	76	(53 - 12	(0)	
Phenol-d5	77	(57 - 12	(0)	
Nitrobenzene-d5	70	(59 - 12	Y2.61	
2-Fluorobiphenyl	71	(49 - 12	72.530	
2,4,6-Tribromophenol	71	(50 - 12	357.54	
Terphenyl-d14	84	(63 - 12		

NOTE (S):

# GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix.....: WATER

LCS Lot-Sample#: D6D030000-503 H2H5E1AD-LCSD

Prep Date....: 04/03/06 Analysis Date..: 04/06/06 Prep Batch #...: 6093503 Analysis Time..: 20:14

Dilution Factor: 1

- 4220 ALTE	PERCENT	RECOVERY	2396	RPD	- CONTRACTOR
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD
4-Methylphenol	69	(58 - 120)		DANGE OF THE REAL PROPERTY.	CFR136A 625
	70	(58 - 120)	2.5	(0-39)	CFR136A 625
Phenol	70	(58 - 112)		19070 - UNGO 11	CFR136A 625
	72	(58 - 112)	2.0	(0-30)	CFR136A 625
2-Chlorophenol	72	(57 - 120)			CFR136A 625
	73	(57 - 120)	1.9	(0-30)	CFR136A 625
1,3-Dichlorobenzene	70	(45 - 120)			CFR136A 625
	73	(45 - 120)	3.5	(0-47)	CFR136A 625
1,4-Dichlorobenzene	69	(45 - 120)			CFR136A 625
	71	(45 - 120)	2.0	(0-49)	CFR136A 625
1,2-Dichlorobenzene	72	(48 - 120)	(%)	53	CFR136A 625
50	75	(48 - 120)	3.2	(0-42)	CFR136A 625
bis(2-Chloroisopropy1) ether	70	(57 - 120)			CFR136A 625
	73	(57 - 120)	5.0	(0-30)	CFR136A 625
N-Nitrosodi-n-propyl- amine	72	(58 - 120)			CFR136A 625
	76	(58 - 120)	6.5	(0-30)	CFR136A 625
Hexachloroethane	72	(43 - 113)			CFR136A 625
	74	(43 - 113)	3.5	(0-52)	CFR136A 625
Nitrobenzene	73	(58 - 120)			CFR136A 625
	76	(58 - 120)	3.6	(0-30)	CFR136A 625
Isophorone	79	(54 - 120)			CFR136A 625
	82	(54 - 120)	4.8	(0-30)	CFR136A 625
2-Nitrophenol	75	(59 - 120)			CFR136A 625
	78	(59 - 120)	3.9	(0-30)	CFR136A 625
2,4-Dimethylphenol	50	(44 - 119)			CFR136A 625
	52	(44 - 119)	3.4	(0-35)	CFR136A 625
bis(2-Chloroethoxy) methane	72	(56 - 120)			CFR136A 625
<del></del>	76	(56 - 120)	4.8	(0-30)	CFR136A 625
2,4-Dichlorophenol	76	(60 - 120)			CFR136A 625
	78	(60 - 120)	2.6	(0-30)	CFR136A 625
1,2,4-Trichloro- benzene	74	(50 - 120)			CFR136A 625
\$2E	76	(50 - 120)	3.3	(0-35)	CFR136A 625

# GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix..... WATER

LCS Lot-Sample#: D6D030000-503 H2H5E1AD-LCSD

	PERCENT	RECOVERY		RPD		
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD	
Naphthalene	71	(52 - 120)		11-01-01-01	CFR136A 625	
	74	(52 - 120)	3.5	(0-30)	CFR136A 625	
Hexachlorobutadiene	73	(49 - 116)			CFR136A 625	
	75	(49 - 116)	3.0	(0-41)	CFR136A 625	
4-Chloro-3-methylphenol	77	(63 - 120)			CFR136A 625	
	80	(63 - 120)	4.0	(0-30)	CFR136A 625	
2,4,6-Trichloro- phenol	77	(60 - 120)			CFR136A 625	
	82	(60 - 120)	6.7	(0-30)	CFR136A 625	
2-Chloronaphthalene	76	(60 - 118)			CFR136A 625	
	81	(60 - 118)	6.3	(0-30)	CFR136A 625	
Dimethyl phthalate	77	(61 - 112)			CFR136A 625	
	83	(61 - 112)	7.0	(0-30)	CFR136A 625	
Acenaphthylene	74	(58 - 120)			CFR136A 625	
	79	(58 - 120)	5.8	(0-30)	CFR136A 625	
Acenaphthene	73	(58 - 120)			CFR136A 625	
	78	(58 - 120)	5.7	(0-30)	CFR136A 625	
2,4-Dinitrophenol	72	(36 - 121)			CFR136A 625	
	78	(36 - 121)	8.9	(0-61)	CFR136A 625	
4-Nitrophenol	74	(53 - 120)			CFR136A 625	
	81	(53 - 120)	8.7	(0-42)	CFR136A 625	
2,4-Dinitrotoluene	80	(60 - 120)			CFR136A 625	
	86	(60 - 120)	8.0	(0-35)	CFR136A 625	
Diethyl phthalate	74	(61 - 114)			CFR136A 625	
	81	(61 - 114)	8.4	(0-30)	CFR136A 625	
4-Chlorophenyl phenyl ether	78	(60 - 120)			CFR136A 625	
	83	(60 - 120)	6.8	(0-30)	CFR136A 625	
Fluorene	75	(60 - 120)			CFR136A 625	
	79	(60 - 120)	5.8	(0-30)	CFR136A 625	
4-Bromophenyl phenyl ether	83	(61 - 120)			CFR136A 625	
	88	(61 - 120)	5.9	(0-34)	CFR136A 625	
Hexachlorobenzene	81	(62 - 120)		12/10/20 (2002)	CFR136A 625	
	87	(62 - 120)	6.3	(0-30)	CFR136A 625	
Pentachlorophenol	83	(49 - 120)		N 28	CFR136A 625	
	88	(49 - 120)	5.9	(0-30)	CFR136A 625	
Phenanthrene	75	(63 - 120)			CFR136A 625	
	81	(63 - 120)	6.7	(0-30)	CFR136A 625	

# GC/MS Semivolatiles

Work Order #...: H2H5E1AC-LCS Matrix....: WATER Client Lot # ...: D6D010117 H2H5E1AD-LCSD

LCS Lot-Sample#: D6D030000-503

	PERCENT	RECOVERY		RPD		
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD	
Anthracene	77	(62 - 120)			CFR136A 625	
	83	(62 - 120)	6.9	(0-30)	CFR136A 625	
Di-n-butyl phthalate	84	(62 - 118)			CFR136A 625	
A 120	89	(62 - 118)	5.5	(0-30)	CFR136A 625	
Fluoranthene	82	(59 - 120)			CFR136A 625	
	87	(59 - 120)	6.2	(0-30)	CFR136A 625	
Pyrene	80	(60 - 115)			CFR136A 625	
3	87	(60 - 115)	9.2	(0-30)	CFR136A 625	
Butyl benzyl phthalate	80	(60 - 120)			CFR136A 625	12
	88	(60 - 120)	8.9	(0-30)	CFR136A 625	
3,3'-Dichlorobenzidine	63	(34 - 120)			CFR136A 625	
	68	(34 - 120)	8.2	(0-50)	CFR136A 625	
bis(2-Ethylhexyl) phthalate	81	(58 - 120)			CFR136A 625	
	97	(58 - 120)	19	(0-30)	CFR136A 625	
Chrysene	76	(60 - 120)			CFR136A 625	
1000	83	(60 - 120)	8.4	(0-30)	CFR136A 625	
Di-n-octyl phthalate	75	(59 - 120)			CFR136A 625	
	80	(59 - 120)	6.6	(0-30)	CFR136A 625	
Benzo(b) fluoranthene	74	(55 - 120)			CFR136A 625	
	83	(55 - 120)	12	(0-90)	CFR136A 625	
Benzo(k) fluoranthene	84	(57 - 120)			CFR136A 625	
	88	(57 - 120)	4.8	(0-50)	CFR136A 625	
Indeno(1,2,3-cd)pyrene	78	(56 - 120)		520	CFR136A 625	9.7
	83	(56 - 120)	6.9	(0-73)	CFR136A 625	
Dibenz(a,h)anthracene	78	(58 - 120)	200	100000000000000000000000000000000000000	CFR136A 625	
	83	(58 - 120)	6.4	(0-78)	CFR136A 625	
Benzo(ghi)perylene	74	(52 - 120)			CFR136A 625	
	80	(52 - 120)	7.7	(0-64)	CFR136A 625	
4,6-Dinitro-	74	(41 - 120)			CFR136A 625	
2-methylphenol	80	(41 - 120)	6.8	(0-55)	CFR136A 625	
Benzidine	22	(10 - 218)			CFR136A 625	
	33	(10 - 218)	39	(0-50)	CFR136A 625	
Benzo(a)pyrene	77	(58 - 120)			CFR136A 625	
	83	(58 - 120)	7.0	(0-73)	CFR136A 625	
Hexachlorocyclopenta- diene	20	(10 - 120)			CFR136A 625	
diene	22	(10 - 120)	7.6	(0-82)	CFR136A 625	

# GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix..... WATER

LCS Lot-Sample#: D6D030000-503

H2H5E1AD-LCSD

1944 UE	PERCENT	RECOVERY		RPD	
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD
N-Nitrosodimethylamine	66	(52 - 120)			CFR136A 625
	68	(52 - 120)	3.0	(0-30)	CFR136A 625
N-Nitrosodiphenylamine	59	(10 - 203)			CFR136A 625
	64	(10 - 203)	8.2	(0-50)	CFR136A 625
2-Methyl-4,6-dinitro- phenol	74	(41 - 120)			CFR136A 625
	80	(41 - 120)	6.8	(0-55)	CFR136A 625
2-Methylphenol	68	(56 - 120)			CFR136A 625
	69	(56 - 120)	1.1	(0-35)	CFR136A 625
n-Decane	61	(28 - 120)			CFR136A 625
	64	(28 - 120)	4.8	(0-61)	CFR136A 625
2-Methylnaphthalene	78	(57 - 120)			CFR136A 625
	82	(57 - 120)	4.4	(0-30)	CFR136A 625.
2,6-Dinitrotoluene	74	(61 - 120)			CFR136A 625
	79	(61 - 120)	7.0	(0-30)	CFR136A 625
Benzo (a) anthracene	79	(60 - 120)			CFR136A 625
	88	(60 - 120)	1.0	(0-30)	CFR136A 625
bis(2-Chloroethy1)- ether	74	(55 - 120)		58 50	CFR136A 625
	78	(55 - 120)	4.6	(0-30)	CFR136A 625

SURROGATE	PERCENT	RECOVERY LIMITS			
2-Fluorophenol	68	(53 - 120)			
	70	(53 - 120)			
Phenol-d5	71	(57 - 120)			
	73	(57 - 120)			
Nitrobenzene-d5	70	(59 - 120)			
	73	(59 - 120)			
2-Fluorobiphenyl	69	(49 - 120)			
	70	(49 - 120)			
2,4,6-Tribromophenol	83	(50 - 120)			
	87	(50 - 120)			
Terphenyl-d14	85	(63 - 120)			
	91	(63 - 120)			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results,

Bold print denotes control parameters

#### GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix.....: WATER

LCS Lot-Sample#: D6D030000-503 H2H5E1AD-LCSD

Dilution Factor: 1

	SPIKE	MEASURED		PERCENT		THE STATE OF THE STATE OF	
PARAMETER	THUOMA	AMOUNT	UNITS	RECOVERY	RPD	METHOD	
4-Methylphenol	100	68.7	ug/L	69		CFR136A	
	100	70.4	ug/L	70	2.5	CFR136A	
Phenol	1.00	70.2	ug/L	70		CFR136A	
	100	71.6	ug/L	72	2.0	CFR136A	
2-Chlorophenol	100	71.9	ug/L	72		CPR136A	625
	100	73.3	ug/L	73	1.9	CFR136A	625
1,3-Dichlorobenzene	100	70.3	ug/L	70		CFR136A	625
	100	72.8	ug/L	73	3.5	CFR136A	625
1,4-Dichlorobenzene	100	69.2	ug/L	69		CFR136A	625
	100	70.6	ug/L	71	2.0	CFR136A	625
1,2-Dichlorobenzene	100	72.4	ug/L	72		CFR136A	625
	100	74.7	ug/L	75	3.2	CFR136A	625
bis(2-Chloroisopropyl) ether	100	69.8	ug/L	70		CFR136A	625
	100	73.4	ug/L	73	5.0	CFR136A	625
N-Nitrosodi-n-propyl- amine	100	71.6	ug/L	72		CFR136A	625
	100	76.4	ug/L	76	6.5	CFR136A	625
Hexachloroethane	100	71.6	ug/L	72	390	CFR136A	
	100	74.1	ug/L	74	3.5	CFR136A	
Nitrobenzene	100	73.2	ug/L	73		CFR136A	
	100	75.9	ug/L	76	3.6	CFR136A	
Isophorone	100	78.6	ug/L	79		CFR136A	
	1.00	82.4	ug/L	82	4.8	CFR136A	
2-Nitrophenol	100	75.5	ug/L	75		CFR136A	
	100	78.5	ug/L	78	3.9	CFR136A	
2,4-Dimethylphenol	100	49.9	ug/L	50		CFR136A	
1	100	51.7	ug/L	52	3.4	CFR136A	
bis(2-Chloroethoxy) methane	100	72.5	ug/L	72		CFR136A	625
	100	76.0	ug/L	76	4.8	CFR136A	625
2,4-Dichlorophenol	100	76.0	ug/L	76		CFR136A	
	100	78.0	ug/L	78	2.6	CFR136A	
1,2,4-Trichloro- benzene	100	73.9	ug/L	74		CFR136A	625
	100	76.3	ug/L	76	3.3	CFR136A	625

# GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix..... WATER

LCS Lot-Sample#: D6D030000-503 H2H5E1AD-LCSD

	SPIKE	MEASURE	D.C.	PERCENT		
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	RPD	METHOD
Naphthalene	100	71.1	ug/L	71	-	CFR136A 625
	100	73.6	ug/L	74	3.5	CFR136A 625
Hexachlorobutadiene	100	73.1	ug/L	73		CFR136A 625
	100	75.4	ug/L	75	3.0	CFR136A 625
4-Chloro-3-methylphenol	100	77.2	ug/L	77	STERRE	CFR136A 625
	100	80.3	ug/L	80	4.0	CFR136A 625
2,4,6-Trichloro- phenol	100	76.7	ug/L	77		CFR136A 625
	100	82.0	ug/L	82	6.7	CFR136A 625
2-Chloronaphthalene	100	76.4	ug/L	76		CFR136A 625
	100	81.4	ug/L	81	6.3	CFR136A 625
Dimethyl phthalate	100	77.5	ug/L	77		CFR136A 625
	100	83.1	ug/L	83	7.0	CFR136A 625
Acenaphthylene	100	74.5	ug/L	74		CFR136A 625
424CH 1977-479 CH 7797-167	100	79.0	ug/L	79	5.8	CFR136A 625
Acenaphthene	100	73.3	ug/L	73		CFR136A 625
jag .	100	77.7	ug/L	78	5.7	CFR136A 625
2,4-Dinitrophenol	100	71.8	ug/L	72		CFR136A 625
	100	78.4	ug/L	78	8.9	CFR136A 625
4-Nitrophenol	100	73.9	ug/L	74		CFR136A 625
	100	80.6	ug/L	81	8.7	CFR136A 625
2,4-Dinitrotoluene	100	79.6	ug/L	80		CFR136A 625
	100	86.3	ug/L	86	8.0	CFR136A 625
Diethyl phthalate	100	74.2	ug/L	74		CFR136A 625
	100	80.7	ug/L	81	8.4	CFR136A 625
4-Chlorophenyl phenyl ether	100	77.7	ug/L	78		CFR136A 625
	100	83.2	ug/L	83	6.8	CFR136A 625
Fluorene	100	74.5	ug/L	75		CFR136A 625
	100	79.0	ug/L	79	5.8	CFR136A 625
4-Bromophenyl phenyl ether	100	82.7	ug/L	83		CFR136A 625
	100	87.7	ug/L	88	5.9	CFR136A 625
Hexachlorobenzene	100	81.4	ug/L	81		CFR136A 625
	100	86.7	ug/L	87	6.3	CFR136A 625
Pentachlorophenol	100	82.8	ug/L	83		CFR136A 625
	100	87.8	ug/L	88	5.9	CFR136A 625
Phenanthrene	100	75.3	ug/L	75		CFR136A 625
	100	80.5	ug/L	81	6.7	CFR136A 625

# GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix.....: WATER

LCS Lot-Sample#: D6D030000-503 H2H5E1AD-LCSD

	SPIKE	MEASURE	D	PERCENT		
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	RPD	METHOD
Anthracene	100	77.2	ug/L	77		CFR136A 625
	100	82.7	ug/L	83	6.9	CFR136A 625
Di-n-butyl phthalate	100	84.0	ug/L	84		CFR136A 625
5 (6)	100	88.8	ug/L	89	5.5	CFR136A 625
Fluoranthene	100	81.6	ug/L	82		CFR136A 625
	100	86.9	ug/L	87	6.2	CFR136A 625
Pyrene	100	79.7	ug/L	80		CFR136A 625
	100	87.3	ug/L	87	9.2	CFR136A 625
Butyl benzyl phthalate	1.00	80.4	ug/L	80		CFR136A 625
	1.00	87.9	ug/L	88	8.9	CFR136A 625
3,3'-Dichlorobenzidine	100	62.6	ug/L	63		CFR136A 625
2 - Control Co	100	67.9	ug/L	68	8.2	CFR136A 625
bis(2-Ethylhexyl) phthalate	100	80.9	ug/L	81		CFR136A 625
	100	97.5	ug/L	97	19	CFR136A 625
Chrysene	100	76.1	ug/L	76		CFR136A 625
	1.00	82.8	ug/L	83	8.4	CFR136A 625
Di-n-octyl phthalate	100	75.3	ug/L	75		CFR136A 625
	100	80.4	ug/L	80	6.6	CFR136A 625
Benzo(b) fluoranthene	100	73.7	ug/L	74		CFR136A 625
	1.00	83.0	ug/L	83	12	CFR136A 625
Benzo(k) fluoranthene	100	84.0	ug/L	84		CFR136A 625
	100	88.1	ug/L	88	4.8	CFR136A 625
Indeno(1,2,3-cd)pyrene	1.00	77.7	ug/L	78		CFR136A 625
	100	83.3	ug/L	83	6.9	CFR136A 625
Dibenz(a,h)anthracene	100	78.3	ug/L	78		CFR136A 625
	100	83.4	ug/L	83	6.4	CFR136A 625
Benzo(ghi)perylene	100	74.1	ug/L	74		CFR136A 625
	100	80.0	ug/L	80	7.7	CFR136A 625
4,6-Dinitro- 2-methylphenol	100	74.4	ug/L	74		CFR136A 625
	100	79.6	ug/L	80	6.8	CFR136A 625
Benzidine	100		ug/L	22		CFR136A 625
	100		ug/L	33	39	CFR136A 625
Benzo (a) pyrene	100	76.9	ug/L	77		CFR136A 625
US (ARO) (5)	100	82.6	ug/L	83	7.0	CFR136A 625
Hexachlorocyclopenta- diene	100	20.2	ug/L	20		CFR136A 625
	100	21.8	ug/L	22	7.6	CFR136A 625

# GC/MS Semivolatiles

Client Lot #...: D6D010117 Work Order #...: H2H5E1AC-LCS Matrix..... WATER

LCS Lot-Sample#: D6D030000-503

H2H5E1AD-LCSD

	SPIKE	MEASUREI		PERCENT		
PARAMETER	THUUNKA	AMOUNT	UNITS	RECOVERY	RPD	METHOD
N-Nitrosodimethylamine	100	66.4	ug/L	66	W. Classic	CFR136A 625
	100	68.4	ug/L	68	3.0	CFR136A 625
N-Nitrosodiphenylamine	100	59.3	ug/L	59		CFR136A 625
	100	64.3	ug/L	64	8.2	CFR136A 625
2-Methyl-4,6-dinitro- phenol	100	74.4	ug/L	74		CFR136A 625
	100	79.6	ug/L	80	6.8	CFR136A 625
2-Methylphenol	100	68.0	ug/L	68		CFR136A 625
	100	68.7	ug/L	69	1.1	CFR136A 625
n-Decane	100	60.9	ug/L	61		CPR136A 625
	100	63.9	ug/L	64	4.8	CFR136A 625
2-Methylnaphthalene	100	78.4	ug/L	78		CFR136A 625
	100	81.9	ug/L	82	4.4	CFR136A 625
2,6-Dinitrotoluene	100	73.7	ug/L	74		CFR136A 625
	100	79.0	ug/L	79	7.0	CFR136A 625
Benzo (a) anthracene	100	78.8	ug/L	79		CFR136A 625
	100	87.5	ug/L	88	1.0	CFR136A 625
bis(2-Chloroethy1)- ether	100	74.2	ug/L	74		CFR136A 625
	100	77.7	ug/L	78	4.6	CFR136A 625

SURROGATE	PERCENT	RECOVERY LIMITS			
2-Fluorophenol	68	(53 - 120)			
	70	(53 - 120)			
Phenol-d5	71	(57 - 120)			
	73	(57 - 120)			
Nitrobenzene-d5	70	(59 - 120)			
	73	(59 - 120)			
2-Fluorobiphenyl	69	(49 - 120)			
	70	(49 - 120)			
2,4,6-Tribromophenol	83	(50 - 120)			
	87	(50 - 120)			
Terphenyl-d14	85	(63 - 120)			
	91	(63 - 120)			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# METHOD BLANK REPORT

#### TOTAL Metals

Client Lot # ...: D6D010117

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT	G UNITS	METHOI	)	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample	#: D6D04000	0-485 Prep B	atch #:	6094485	12		
Iron	ND	100	ug/L	MCAWW	200.7	04/05/06	H2LDJ1AA
		Dilution Fact	or: 1				
		Analysis Time	9: 18:42				
Zinc	ND	20 .	ug/L	MCAWW	200.7	04/05/06	H2LDJ1AC
		Dilution Pact	tor: 1				
		Analysis Time	3: 18:42				

#### TOTAL Metals

Client Lot #...: D6D010117 Matrix..... WATER

PERCENT RECOVERY PREPARATIONPARAMETER RECOVERY LIMITS METHOD ANALYSIS DATE WORK ORDER #

LCS Lot-Sample#: D6D040000-485 Prep Batch #...: 6094485

Iron 95 (89 - 116) MCAWW 200.7 04/05/06 H2LDJ1AD

Dilution Factor: 1 Analysis Time..: 18:47

Zinc 93 (84 - 111) MCAWW 200.7 04/05/06 H2LDJ1AE

Dilution Factor: 1 Analysis Time..: 18:47

NOTE(S):

# TOTAL Metals

Client Lot	#: D6D	010117			м	latrix:	WATER
PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sam	ple#: D6D	040000-48	5 Prep Bate	ch #	: 6094485		
Iron	1000	946	ug/L	95	MCAWW 200.7	04/05/06	H2LDJ1AD
		D	ilution Factor	: 1	Analysis Time: 18	:47	
Zinc	500	463	ug/L	93	MCAWW 200.7	04/05/06	H2LDJ1AE
		D	ilution Factor	: 1	Analysis Time: 18	:47	
NOTE(S):					100 No. 100 No		

# MATRIX SPIKE SAMPLE EVALUATION REPORT

# TOTAL Metals

- 5	35	)/06 12:30 Date				
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sam	ple #: D6D01	0117-001 Prep	Batch #	.: 6094485		
Iron	NC, MSB	(89 - 116)		MCAWW 200.7	04/05/06	H2FL41AN
	NC, MSB	(89 - 116)	(0-20)	MCAWW 200.7	04/05/06	H2FL41AI
		Dilution Fa	ctor: 1			
		Analysis Ti	me: 19:02			
zinc	94	(84 - 111)		MCAWW 200.7	04/05/06	H2FL41A(
	95	(84 - 111) 1.1	(0-20)	MCAWW 200.7	04/05/06	H2FL41A
		Dilution Pac	ctor: 1			
		Analysis Tir				

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

#### MATRIX SPIKE SAMPLE DATA REPORT

#### TOTAL Metals

Client Lot #...: D6D010117 Matrix....: WATER

Date Sampled...: 03/30/06 12:30 Date Received..: 04/01/06

PARAMETER	SAMPLE AMOUNT		MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHO	)	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sar	mple #:	D6D0101	117-001	Prep Bat	ch #: 6	09448	5			
Iron										
Se la Contrata	56000	1000	57500	ug/L			MCAWW	200.7	04/05/06	H2FL41AN
			Qual	lifiers:	NC,MSB					
	56000	1000	61300	ug/L			MCAWW	200.7	04/05/06	H2FL41AP
			Qual	lifiers:	NC, MSB				3	
			Dilu	tion Factor	r: 1					
			Anal	ysis Time.	: 19:02					35
Zinc									0.0	
	53	500	535	ug/L	94		MCAWW	200.7	04/05/06	H2FL41AQ
	53	500	541	ug/L	95	1.1	MCAWW	200.7	04/05/06	H2FL41AR
			Dilu	tion Factor	c: 1					
			Anal	ysis Time.	1 19:02					

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

NOTE (S):

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

# METHOD BLANK REPORT

# General Chemistry

Matrix....: WATER

Client Lot #...: D6D010117

PARAMETER	RESULT	REPORTIN	371/E01/F01	recorded	PREPARATION-	PREP
Ammonia as N	KESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	BATCH #
initial as h	ND	0.10	#: H27RKLAA mg/L	MB Lot-Sample #: MCAWW 350.1	D6D130000-302 04/12/06	6103302
11	ND	Dilution Fact	Charles and the second of	MC21MM 350+1	04/12/06	0103302
11.7		Analysis Time				
Biochemical Oxygen Demand (BOD)		Work Order	#: H2QW31AA	. MB Lot-Sample #:	D6D010000~081	
	ND	2.0	mg/L	MCAWW 405.1	04/01/06	6091081
		Dilution Fact				
8		Analysis Time	: 10:15			
Chemical Oxygen Demand (COD)		Work Order	#: H2Q621AA	MB Lot-Sample #:	D6D060000-487	
	ND	20	mg/L	MCAWW 410.4	04/06/06	6096487
		Dilution Fact		(W)	- 91	
		Analysis Time	18:00			
HEM (Oil and Greas	e)	Work Order	#: H2TMD1AA	MB Lot-Sample #:	D6D060000-396	
The state of the s	ND	5.0	mg/L	CFR136A 1664A HEM		6096396
		Dilution Fact	or: 1			
		Analysis Time	1: 12:00			
Nitrate-Nitrite		Work Order	#: H2RF61AA	MB Lot-Sample #:	D6D060000-526	
	ND	0.10	mg/L	MCAWW 353.2	04/05/06	6096526
		Dilution Fact	F (50 - 70			
		Analysis Timo	: 20:00			
Total phosphorus		Work Order	#: H25WX1AA	MB Lot-Sample #:	D6D100000-550	
	0.011 B	0.050	mg/L	MCAWW 365.3	04/10/06	6100550
		Dilution Páct				
		Analysis Time	: 23:50			
Total Kjeldahl Nitrogen		Work Order	#: H25VC1AA	MB Lot-Sample #:	D6D110000-533	
	ND	0.50	mg/L	MCAWW 351.2	04/10-04/11/06	6101533
		Dilution Fact	or: 1			
		Analysis Time	: 17:00			
Total Suspended Solids		Work Order	#: H2R1D1AA	MB Lot-Sample #:	D6D060000-142	
	ND	4.0	mg/L	MCAWW 160.2	04/05/06	6096142
		Dilution Fact	or: 1			
		Analysis Time	: 12:20			

Calculations are performed before rounding to avoid round-off errors in calculated results.

NOTE(S):

B Estimated result. Result is less than RL.

# General Chemistry

Lot-Sample #	: D6D01	.0117				Matrix	: WATER
PARAMETER	PERCENT	RECOVERY LIMITS	חפק	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Ammonia as N			PKIAC	-LCS/H27		Lot-Sample#: D6D1	
Andionia as h	95	(90 - 110)		- DCD/ NE	MCAWW 350.1	04/12/06	6103302
	98	(90 - 110)	3.1	(0-10)	MCAWW 350.1	04/12/06	6103302
	30				Analysis Time.		
Biochemical Demand (BC	CONTRACTOR CONTRACTOR	WO#: H20	W31AC	-LCS/H20	W31AD-LCSD LCS	Lot-Sample#: D6D0	10000-081
Demana (De	110	(85 - 115)			MCAWW 405.1	04/01/06	6091081
	100			(0-20)	MCAWW 405.1		
	100				Analysis Time.		
Chemical Oxy	and the second second	WO#:H20	621AC	-LCS/H2Q	0621AD-LCSD LCS	Lot-Sample#: D6D0	60000-487
Demand (CC	90.5	/00			MC2107 430 4	04/06/06	6096487
	90	(80 - 115)			MCAWW 410.4		6096487
	91				MCAWW 410.4 Analysis Time.		00,010,
HEM (Oil and	(Greace)	WO# - H29	MD1AC	-TCS/H29	MD1AD-LCSD LCS	Lot-Sample#: D6D0	60000-396
mar (orr care	90	(82 - 103)		200,110	CFR136A 1664A	HEM 04/06/06	6096396
	92			(0-47)	CFR136A 1664A	300 (Hg) 500 (Hg) (Hg) (Hg) (Hg) (Hg) (Hg) (Hg) (Hg)	
				tor: 1			
Nitrate-Nitr	ite	WO# : H2F	F61AC	-LCS/H2F	RF61AD-LCSD LCS	Lot-Sample#: D6D0	60000-526
	106	(90 - 112)			MCAWW 353.2	04/05/06	6096526
	101	(90 - 112)	4.8	(0-10)	MCAWW 353.2	04/05/06	6096526
					Analysis Time.		
Total phosph	norus	WO#: H25	WX1AC	-LCS/H2	WX1AD-LCSD LCS	Lot-Sample#: D6D2	100000-550
14 B	99	(90 - 110)			MCAWW 365.3	04/10/06	6100550
29	103			(0-20)	MCAWW 365.3	04/10/06	6100550
				tor: 1	Analysis Time.	.: 23:50	
Total Kjelda Nitrogen	ahl	WO#: H2	SVC1AC	C-LCS/H2	SVC1AD-LCSD LCS	Lot-Sample#: D6D	
	104	(77 - 115)			MCAWW 351.2	04/10-04/11/0	6101533
	109	(77 - 115)		(0-25)		04/10-04/11/0	6101533
				etor: 1	Analysis Time.	.: 17:00	

# General Chemistry

Lot-Sample #...: D6D010117

Matrix..... WATER

PARAMETER	PERCENT RECOVERY	RECOVE	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Suspe Solids	nded	WO# :	H2R1D1AC	-LCS/H2F	1D1AD-LCSD LCS I	ot-Sample#: D6D0	60000-142
	90	(86 - 1	114)		MCAWW 160.2	04/05/06	6096142
	92	(86 - 1	114) 2.2	(0-20)	MCAWW 160.2	04/05/06	6096142
		754	Intion Pac	tors 1	Analysis Time	12:20	

NOTE(S):

# General Chemistry

Lot-Sample #: D6D010117	Matrix: WATER
-------------------------	---------------

	SPIKE	MEASUR	ED	PERCNT				PREPARATION-	PREP
PARAMETER	AMOUNT	AMOUNT	UNITS			METHOI		ANALYSIS DATE	BATCH #
Ammonia as N		M	O#:H27RK1A	C-LCS/H2	7RK1F	D-LCSD	LCS Lot-Sa	ample#: D6D13000	
	4.00	3.79	mg/L	95		MCAWW	350.1	04/12/06	6103302
	4.00	3.91	mg/L	98		MCAWW		04/12/06	6103302
			Dilution Fa	ctor: 1		Analysis	Time: 17:00	G	
Biochemical	Oxygen	M	O# : H2QW3 1A	C-LCS/H2	QW3 17	D-LCSD	LCS Lot-S	ample#: D6D01000	0-081
Demand (BO	D)							9664999000444	1240153030144.1
	198	218	mg/L	110			405.1	04/01/06	6091083
	198	198	mg/L	100	C 19 (1)	MCAWW		04/01/06	6091083
			Dilution Pa	ctor: 1		Analysis	Time: 10:15		
Chemical Oxy Demand (CO		W	O#:H2Q621A	C-LCS/H2	Q621 <i>I</i>	D-LCSD	LCS Lot-S	ample#: D6D06000	0-487
	100	90.3	mg/L	90		MCAWW	410.4	04/06/06	6096487
	100	90.6	mg/L	91	0.37	MCAWW	410.4	04/06/06	6096487
			Dilution Fa	ctor: 1		Analysis	Time: 18:00		
HEM (Oil and	Grease)	W	0#:H2TMD1A	C-LCS/H2	TMD17	D-LCSD	LCS Lot-S	ample#: D6D06000	
	40.0	36.1	mg/L	90		CFR13	6A 1664A HE		6096396
	40.0	37.0	mg/L	92	2,5	CFR13	6A 1664A HE	M 04/06/06	6096396
			Dilution Fa	ctor: 1		Analysis	Time: 12:00	)	98
Nitrate-Nitr	ite	W	O#:H2RF61A	C-LCS/H2	RF617	D-LCSD	LCS Lot-S	ample#: D6D06000	0-526
	4.00	4.23	mg/L	106		MCAWW	353.2	04/05/06	6096526
	4.00	4.03	mg/L	101	4.8	MCAWW	353.2	04/05/06	6096526
			Dilution Fa	ctor: 1		Analysis	Time: 19:00	2	
Total phosph	orus	W	O#:H25WX1A	C-LCS/H2	5WX17	AD-LCSD	LCS Lot-S	ample#: D6D10000	0-550
30 X254	0.500	0.497	mg/L	99		MCAWW	365.3	04/10/06	6100550
	0.500	0.513	mg/L	103	3.1	MCAWW	365.3	04/10/06	6100550
			Dilution Fa	ctor: 1		Analysis	Time: 23:50	)	
Total Kjelda Nitrogen	hl	M	O#:H25VC1A	.c-Lcs/H2	5VC12	AD-LCSD	LCS Lot-S	ample#: D6D11000	0-533
	5.00	5.22	mg/L	104		MCAWW	351.2	04/10-04/11/06	6101533
	5.00	5.45	mg/L	109	4.3	MCAWW	351.2	04/10-04/11/06	610153
		-44 15 15 5 5 F	Dilution Fa			Analysis	Time; 17:00	)	

# General Chemistry

Lot-Sample #...: D6D010117

Matrix....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY		METHOI	)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Suspe Solids	nded	#O#	:H2R1D1AC-	LCS/H2	R1D1A	D-LCSD	LCS Lot-Sa	umple#: D6D06000	0-142
	100	90.0	mg/L	90		MCAWW	160.2	04/05/06	6096142
	100	92.0	mg/L	92	2.2	MCAWW	160.2	04/05/06	6096142
		D	ilution Fact	or: 1		malvais	Time: 12:20		

NOTE (S):

# MATRIX SPIKE SAMPLE EVALUATION REPORT

# General Chemistry

Client Lot #...: D6D010117 Matrix.....: WATER

Date Sampled...: 03/27/06 11:54 Date Received..: 03/29/06

	PERCENT	RECO	OV	ERY		RPD			PREPARATI	ON-	PREP
PARAMETER	RECOVERY	LIM	IT	S	RPD	LIMITS	METHOD		ANALYSIS		
Ammonia as N		200		WO#:	H17X	61AR-MS/	H17X61AT-MSD	MS	Lot-Sample	#:	D6C290343-001
	89	(81	-	114)			MCAWW 350.1		04/12/	06	6103302
	89	(81	-	114)	0.37	(0-10)	MCAWW 350.1		04/12/	06	6103302
				Dilut	ion Fac	ctor: 1					
				Analy	sis Tir	me: 17:0	0			3	
Chemical Oxy	gen			WO#:	H17X	61AU-MS/	H17X61AV-MSD	MS	Lot-Sample	#:	D6C290343-001
Demand (COD)		100200300		0000000			56 0000000 Get 1,00000 1,000				222222
	99 I			109)		n was more sone or	MCAWW 410.4		04/06/		6096487
	99 I	(74	-				MCAWW 410.4		04/06/	06	6096487
						ctor: 1					
				Analy	ois Ti	me: 18:0	00				
Nitrate-Nitr	ite			WO#:	H2EE	M1AL-MS/	H2EEM1AM-MSD	MS	Lot-Sample	#:	D6C310302-001
	106	(72	-	113)			MCAWW 353.2		04/05/	06	6096526
	104	(72	-	113)	1.4	(0-17)	MCAWW 353.2		04/05/	06	6096526
				Dilut	ion Fa	ctor: 1					
				Analy	sis Ti	me: 21:0	00				
Total phosph	orus			WO#:	H2NE	81C4-MS/	H2NE81C5-MSD	MS	Lot-Sample	#:	D6D050329-001
Service Company of the Service Company	97	(71	-	128)			MCAWW 365.3		. 04/10/	06	6100550
	98	(71	-	128)	0.72	(0-22)	MCAWW 365.3		04/10/	06	6100550
				Dilut	ion Fa	ctor: 1					
				Analy	eis Ti	me: 23:5	50		(0)		
Total Kjelda	hl			WO#:	H2BB	M1AQ-MS/	H2EEM1AR-MSD	MS	Lot-Sample	#:	D6C310302-001
Nitrogen				eschole Mod.							
110453546765740	32 N	(54	-	131)			MCAWW 351.2		04/10-04/	11/	06 6101533
	21 N	(54	-	131)	11	(0-38)	MCAWW 351.2		04/10-04/	11/	06 6101533
		,		Dilut	ion Fa	ctor: 1	V				
				Analy	sis Ti	me: 17:0	00				

# NOTE (S):

Estimated result. Result concentration exceeds the calibration range.

N Spiked analyte recovery is outside stated control limits.

#### MATRIX SPIKE SAMPLE DATA REPORT

# General Chemistry

Client Lot #...: D6D010117 Matrix..... WATER

Date Sampled...: 03/27/06 11:54 Date Received..: 03/29/06

PARAMETER	SAMPLE		MEASRD	UNITS	PERCNT	RPD	метно	D	PREPARATION- ANALYSIS DATE	PREP BATCH #
Ammonia as	N		THE RESERVE AND ADDRESS OF THE PARTY NAMED IN	H17X61AR-M			and head for the state of the		Le #: D6C290343	
	8.8	20.0	26.6	mg/L	89			350.1	04/12/06	6103302
	8.8	20.0	26.7	mg/L	89	0.37	MCAWW	350.1	04/12/06	6103302
			Dilut.	ion Pactor: 1						
			Analy	sis Time: 1	7:00					
Chemical O	xygen		WO#:	H17X61AU-M	S/H17X612	V-MSI	MS I	Lot-Sampl	le #: D6C290343	-001
Demand (CO)	D)		1000000000					**************************************	TOTAL DISTRESS	
- 3	120	100	218 I	mg/L	99		MCAWW	410.4	04/06/06	6096487
	120	100	218 I	mg/L	99	0.0	MCAWW	410.4	04/06/06	609648
			Dilut	ion Pactor: 1						
			Analys	sis Time: 1	8:00					
Nitrate-Nit	trite		WO#:	H2EEM1AL-M	S/H2EEM17	M-MSI	) MS I	Lot-Sampl	le #: D6C310302	-001
1	ND	4.00	4.22	mg/L	106			353.2	04/05/06	6096526
1	ND	4.00	4.16	mg/L	104	1.4	MCAWW	353.2	04/05/06	6096526
			Diluti	on Factor: 1						
			Analys	is Time: 2	1:00					
rotal phosp	phorus		WO#:	H2NE81C4-M	S/H2NB810	5-MSI	MS I	Lot-Sampl	e #: D6D050329	-001
(	0.069	0.500	0.553	mg/L	97		MCAWW		04/10/06	6100550
(	0.069	0.500	0.557	mg/L	98	0.72	MCAWW	365.3	04/10/06	6100550
			Diluti	on Factor: 1						
			Analys	is Time: 23	150					
Total Kjeld Nitrogen	lahl		WO#:	H2EEM1AQ-M	s/H2EEMLA	R-MSI	MS I	Lot-Sampl	e #: D6C310302	-001
77	.7	5.00	5.32 N	mg/L	32		MCAWW	351.2	04/10-04/11/06	6101533
3	.7	5.00	4.75 N	mg/L	21	11	MCAWW	351.2	04/10-04/11/06	
			Diluti	on Factor: 1						
			Analys	is Time: 17	2:00				(3)	

NOTE (S):

I Estimated result. Result concentration exceeds the calibration range.

N Spiked analyte recovery is outside stated control limits.

# SAMPLE DUPLICATE EVALUATION REPORT

# General Chemistry

Client Lot #...: D6D010117 Work Order #...: H2FMC-SMP Matrix....: WATER

H2FMC-DUP

Date Sampled...: 03/30/06 13:20 Date Received..: 04/01/06

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Biochemical Oxyg	en		0.7		SD Lot-Sample #:	D6D010117-002	
Demand (BOD)					당 등	\$1 (St)	10.000 10.0000
6.1	5.8	mg/L	5.7	(0-20)	MCAWW 405.1	04/01/06	6091081
		Dilution Fact	or: 1	And	alysis Time: 10:15		

# SAMPLE DUPLICATE EVALUATION REPORT

# General Chemistry

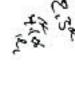
Client Lot #...: D6D010117 Work Order #...: H2DM4-SMP Matrix.....: WATER

H2DM4-DUP

Date Sampled...: 03/30/06 10:01 Date Received..: 03/31/06

			an noc-pampie #	: D6C310202-001	
mg/L	11	(0-20)	MCAWW 160.2	04/05/06	6096143
		mg/L 11 Dilution Pactor: 1		mg/L 11 (0-20) MCAWW 160.2	mg/L 11 (0-20) MCAWW 160.2 04/05/06

# Chain of Custody Record



SEVERN STL

STL Deriver 4955 Yarrow Street Arvada, CO 80002

Severn Trent Laboratories, Inc.

STL-4124 (0901)								
EARTH TECH		Project Man	Project Manager Rox BOYC	Source	se -	20/8/K	Chain of Gustody Murgeos 323464	23464
800 ST.	000 ALS		1488-273-808	808-S23-8884/-8950			Page	Q
Suns ours	20 Code Code			To Carried San	Anai	Analysis (Attach list if more space is needed)	-	
Scoper Kanna and Location (States)		Carrier/Wayolf Number	And Munder		N	ь ф)	Special Instructions	structions/
7-635X Slob			Matrix	Containers & Preservatives	1 71k	als (	Conditions	Conditions of Receipt
Sample I.D. No, and Description (Containers for each sample may be combined on one line)	Date	Time &	Aqueous Sed. Soli	Unpres. H2SO4 HNO3 HCI NaOH ZnAc/ NaOH	TSON NO.	800 625 Med		
このついまりならし - つとのい	20.05	1230	×	- 10	×	×		
		_	人	×	メダメ	×		
11 3	1-	1	7	×		×		
	100			1				
				1	_			
					/	<i> </i> -		
							1	
Possible Hazard Identification  Non-Hazard	□ Poison B □	□ Unknown □	Sample Disposal  Return To Client	☐ Disposel By Leb	Auctive For	(A fee may be assess Months longer (han f morth)	(A fee may be assessed if samples are retained longer than if morth)	reined
Turn Around Time Required  24 Hours 48 Hours 7 Days 14 Days	2100	\$ J		OC Requirements (Spe	77			
AND SHA		Dare 25.30-04	5151 P	1. Received By	diship	(A)	Date Dalle	Time CMC
2. Relinquished By C		Date	Time	2. Received By	,			Time
3. Relinquished By		Date	Timo	3. Received By			Dare .	Timo
Comments								

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Stays with the Sample: PINK - Field Copy

N.	FIELD INF	FORMATIC	ON FORM	1	N.	
Site Name: UGSLF Site No.: Sample Point: U	This form is a	Management Field Information to be completed, in additioning with the Chain of Custon, with the cooler that is ex-	to any State Forms. dy Forms that accomp	The Field Form is uny the sample	Liburatory Use Onl	WALE TO SERVICE OF THE PARTY OF
More: For Passive Sampling, replace "Water  Purging and Sampling Equipment Deda  Purging Device A- Substitute B-Perist		el Weser Vol in Tubing/Flor	pe: A	(G  w Cell Vols Purged, M  0.45 µ or  o'in-line Disposable  -Pressure  -Tetlon	Ju (circle C-Vacoum X-Other	e ce fill in)
Well Elevation (at TOC)  Total Well Depth (from TOC)  Note: Total Well Depth, Stick Up. Caring 16.	Depth to Water (DT (fi/mal) (from TOC)  Stick Up  (ft) (from ground elevation	on)	(A) (B) (B) (B) (B) (B) (B) (B) (B) (B) (B		Casing Material	(ft/mal)
Sample Time Rate/Unit pH (2400 Hr Clock)  1 2 3 0 1 1" 1  Suggested range for 3 cossec. readings or note Permit/State requirements:  Stabilization Data Fields are Optional (i.e. complety State Permit/State in a phase of the pH (MM DD YY) (std)  Sample Appearance:  Weather Conditions (required daily, or as	(µmhos/em @ 25 °C)  1"  2"  3"  4"  4"  4"  4"  4"  4"  4"  4"  4	TEMP. T	Colo	DO (mg/L-ppan)	eH/ORP (mV)	ose separate theet or for Other: Units  actiPermit/Site.
STORM WATER	SAMPLE FI			HANNE PRCHOLO		
1 certify that sampling procedures were in as	12 KERIAN C	signature	if more than one sa	mpler, all should sig	भ्राम इ	ECH

	FI	ELD INFORMA	TION FORM	1	V	VAVA
Site WAIMANGLO	B GULCH	This Waste Management Fig. This form is to be completed, is submitted along with the Chair	ld Information Form is Requir in addition to any State Forms. In of Custody Forms that accomp	ed The Field Form is vary the sample	Laboratory Use Only C	202
e.:	Sample ID	continues the water the owner	that is returned to the laborator	9.		
PURGE DATE	ШШ		ШШ			Ш
(MM DD YY)  Note: For Parties Sampling, rep	PURGE TIME (2400 Br Cleek) place "Water Vol in Caring" and	ELAPSED HRS (hosmin) "Well Volt Parged" of Hungt Vol in 7	WATER VOL IN CASE (Gellone) Inhing/Flow Cell and Tabing/Flo	(G	VOL PURGED isliens) ork changes, record fiel	WELL VOLS PURGED d dna. belov.
Perging and Sampting Equipme Purging Device	A- Submersible Pump B-Peristaltic Pump	D-Bailer	124 12 3 4 1 1 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.45 µ or	μ (circle or C-Vacuum X-Other	fill in):
Purging and Sampling Equipm Purging Device Sampling Device X-Other:	C-QED Bladder Pump	F-Dippea/Bottle	/	-Teflon	C-PVC X-O D-Polypropylene	her:
Well Elevation (at TOC)		pth to Water (DTW)	S	Froundwater Elevation Site datum, from TOC	(5) L (5) L L L L	(tvmsl)
Total Well Depth (from TOC)	(fi) (fee	ck Up om ground elevation) d can be from Nisserical data, walcas	(fi) 1	Casing (in)	Casing Material undwater Elevation mas	n be current.
Sample Time Rate/Uni (2400 Hr Clock)	it pH Conduc	tance (SC/EC) Temp. Vcm @ 25 °C) (°C)	Turbidity (tru)	D.O (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
13:20						
	2 <sup>M</sup>   2 <sup>M</sup>   3 <sup>M</sup>					
	0 1 1 0 1					111
			.11111	1 1		111
						111
Suggested range for 3 consect medings of	7/-02	1 1 1	1111	+/- 10%	+/- 25 mV	Smbilline
note Permit/State requirements: Stabilization Data Fields are Option to State/Permit/Site. W.o. Pero Legac	nal (i.e. complete stabilization r	eadings for parameters required by sed, fill in final readings below and so	WM, Site, or State). These fi	elds can be used where to Site. If more fields	e four (4) field measure above ore needed, use	ements are require separate thest or
SAMPLE DATE	The state of the s	DUCTANCE TEMP.	TURBIDITY	DO	eH/ORP O	ther:
033004	767	s/cm @ 25°C) (*C)	(ntu)	(mg/L-ppm)		wits
Final Field Readings are required	i.e. record field measurements	final stabilized readings, passive s		Stay - River Library		PermitSite.
Sample Appearance: Weather Conditions (required	daily, or as conditions chang	24 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 (100)	or:ok:		on: Y or N
Specific Comments (including	[개 - 11]		WEST C	OFFA. I		
SIDEN WAT	et arrive	DE TROM	WESL-D			
Legalfy that sampling procedure	es were in accordance with a	pplicable EPA, State, and WM p	erotpools (if more than one s	sampler, all should si	gn):	
하다. 사람이 어떻게 살아가면 어떻게 하지 않는데 없다.	Memas Ker	-K 421	<u></u>		ARTH TEC	<del></del>
Date N	Same	Signature		Com	npany	
		TE/ORIGINAL - Stays with Sample	c, YELLOW - Returned to Cli	out. PINK - Field Copy		W. manufacture D.

Table 1: WGSL Storm Water Sampling Analytical Results from Upstream Channel Inlet and Detention Pond

(Sample Collected March 30, 2006)

Parameter (units) /Method No.	Upstream	Detention Basin	Effluent Limitation
Flow (gallons) <sup>1</sup>	N/A	1,367.03	No limitation at this time
BOD (mg/L) / E405.1	5.1	6.1	No limitation at this time
COD (mg/L) / E410.4	17 B	19 B	No limitation at this time
TSS (mg/L) / E160.2	1,000 Q	1,500 Q	100
Total Phosphorous (mg/L) / E365.3	0.030 B	0.062	No limitation at this time
Total Nitrogen (mg/L) / E351.2	0.48 B	0.81	No limitation at this time
Nitrate + Nitrite Nitrogen (mg/L) / 353.2	0.29	0.62	No limitation at this time
O&G (mg/L) / E1664A	1.9 B	15	15
pH / E150.1 (Standard Units)	7.24	7.67	7.6-8.6
Total Recoverable Iron (mg/L) / E200.7	56.0	120.0	1.0
Total Recoverable Zinc (mg/L) / E200.7	0.063	0.330	0.0223
Ammonia as N (mg/L) / E350.1	0.27	0.20	10³
Alpha Terpineol (mg/L) / E625	ND	ND	0.033
Benzoic Acid / E625	ND	ND	0.123
p-Cresol <sup>2</sup> (mg/L) / E625	ND	ND	0.0253
Phenol (mg/L) / E625	ND	ND	0.026 <sup>3</sup>

Results in BOLD indicate an exceedance of Effluent Limitation specified in the Notice of General Permit Coverage

All samples collected were grab samples

Not available mg/L milligram per liter

Estimated result; result is less than reporting limit Not detected at or above reporting limit indicated in ( ) ND

Elevated reporting limit. The reporting limit is elevated due to high analyte levels Q

Gallons reported in gallons per minute p-Cresol reported by analytical laboratory as 4-Methylphenol 2 3 Effluent Limitation presented is a daily maximum value

Attachment C Storm Water Event Form

# Storm Water Sampling Form Waimanalo Gulch Sanitary Landfill Storm Water Pollution Control Plan

Sampling Location:	WG\$LF-DB01W			Date: March 30, 2006
				Project Number: 92114.03
Sampling Personnel	: Thomas Kerian			·
Weather Conditions:	Cloudy, light wind	is		
Observations/Comm	ents Steady mode	rate flow exitin	ng east and west outfall	(sampling location)
Time at Start of Rain	: Not available (N/	A)	Time of First Run	off: N/A
Sample Collection M	lethod: Grab Sam	ple		
Flow-Measurement I	Method: Ruler subn	nerged in wat	er exiting 42 inch corrog	ated metal pipe (WGSLF-DB01W)
Describe: Flow de (cfs)	pth measurement = 7	' inches exitin	g west outfall, resulting i	n approximately 3.05 cubic feet per second
SAMPLE NUMBER	TIME SAMPLED	pH	FLOW MEASUREM	ENTS
WGSL-DB01W	1320	7.67	7 inches = 3.05 cfs (	1,367.03 gallons per minute)
Comments:				

# Storm Water Sampling Form Waimanalo Gulch Sanitary Landfill Storm Water Pollution Control Plan

Sampling Location:	WGSL-UPRCHNLO	01		Date: March 30, 2006
I TOTAL TO A CONTROL OF THE STREET STREET				Project Number: 92114,03
Sampling Personnel	Thomas Kerian			1
Weather Conditions:	Cloudy, light win-	ds		
Observations/Comm	ents Heavy rain st above the co	orms have ca ncrete channe	used heavy flow, sample	collected at pooling area of natural stream
Time at Start of Rain	: Not available (N/	(A)	Time of First Runo	off; N/A
Sample Collection M	ethod: Grab Sam	ple		
Flow-Measurement N	Method: N/A			
Describe: N/A				
SAMPLE NUMBER	TIME SAMPLED	pН	FLOW MEASUREME	ENTS
WGSL- UPRCHNL01	1230	7.24	N/A	
				The second secon
Comments:				
				- Gi

Attachment D Field Notes

3 Date 3.30.06 WATER DEPTH FROM Borrom OF CORREGANTED PIPE P.DE. SHIDMENT AND STORED IN FROM 1340 LEFT SITE FOR LAREROUSE THE EAST SLDE LUAS STORES PREPARA BOTTLES 1415; Appine AT CAREGUUSE 200 OUTFALL FRIDGE CVERNIGHT 1320- COLLECTED SAMPLE CARENUSE. OUTHE WEST WGSL-7301W west side Location WESLF SOO! LEAVE 1300 (cocy) 301750 ての Project / Client \_ 1310; TOOK CONTRE GENER NIGHSONZE MENTS Date 2.30 -06 WITH DAVE OF WM, are STOPPED COUCEETE CHARINEE OF THE SAMPLE WGSL-UPRCHNLOI WAS THE MATTER STREEM, MEET 1050 BOTH OF THE OUTFOUR PIPES UP SOP OF THE CANAFICE WHERE HELP DETERMINE HOW MUCH COLLECTION, A. MOLLING AREA CA READINGS FROM GW WELLS. HEAVY above the concerne chanker. SAMPLE PUT ON 108, MOTBED TO 1220: AR AT LF TO COLLECT. STORM WATER& SAMPLE HUD TAKE DIW THE MATURAL STREAM WERTS BUNTER IS COMMING OUT TROOM RAILS STORMS CASSED MAJOR 1230: GETTING A RIGE UP THE UF DOWN CHANEL SPECELBARY. STORM CHATER FLOW, HOLDING POUL Location WASLF Project / Client 型上 1230: 32

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	The state of the s

0830 Sustin lottig on Site Reported Lusathrer @ Wost as cloudy. Detention gond water level has dropped approximately 1 Foot, signs of previous level remained at base of ripray / check dam (Lennemplaya) stated Cercently 19th Riving is dig an size - but it did ask last of uniscs another from appointes cultity 1000 30 12 × 7-2 wide - water make the rip up speration 19 half of cond. is no wear near the dist-line on 0100 JL talked & Notalie or sub Seony getoloi/ 1/30 OF 10

Attachment E DMR for the Current Reporting Period Form Approved. OMB No. 2040-0004 Approved expires 05-31-50

NATIONAL POLLUTAIT DISCHARGE ELIMNATION SYSTEM (WPDES) DISCHARGE MONITORING REPORT (DAG)

NAME WASTE MENSORMENT OF HELDEN , INC.

DISCHARGE NUMBER R 504533 PERMIT NUMBER

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NOTE: Road Instructions before completing this form.

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COMMENTS AND EXPLONATION OF ANY VIOLATIONS PRIMINGS ALL LIBERARIES MAIN

Form Approved. OMB No. 2040-0004 Approval expines 65-31-59

From 2006 03 YEAR racum acimenalo culda Sanitary Landfill locamon 92-460 Ferrington Highwady Kapolici, Haddari 96707 MANNE WOOSE MANAGEMENT Of HOLDING INC. Acapoles, Havain 96404

MATIONAL POLLUTANT DISCUSSE ELIMINATION SYSTEM (MPDES) DISCHARGE MONITORING REPORT (DMR)

HI R 50953 PERMIT NUMBER

05 01 Result (2007) DISCHARGE NUMBER 9 000 1000 COUNTY (2427) MONITORANG PERIOD S

NOTE: Read instructions before completing this form.

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Forth Approved. OARB No. 2040-0004 Approval explines 05-31-38

Kapples Hawaii ab 107 Landfill MANNE WASTE MANAGENETH OF HAWAII, INC. Highwag LOCATION 92-460 Farrington Highlie Habel

MATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) DISCHARGE MONITORING REPORT (DMR) DISCHARGE NUMBER 拉 R508533 PERMIT NUMBER

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NOTE: Road instructions before completing this form.

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (MAyrane at altachmatic hard)

EPA Form 3520.

Attachment F Photo Log



Cross View of Circular CMP Culverts which Lead from WGSL, Under Farrington Highway, to the Pacific Ocean. The Square CMP Culverts Originate from an Adjacent Property and Discharge to the Pacific Ocean.



Close Up View of the Circular CMP Culverts Reflecting No Storm Water Discharge into the Pacific Ocean.

Attachment G Site Inspection Forms

### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	3-22-06	
Inspector	Suzan Pankenier	
Current \	Weather Conditions Cloudy; Stormy	•
Refuse D	Disposal Area:	
ν	Vorking face as small as possible?	Yes V No
G	brading to prevent water run-on into refuse?	Yes No _
D	Paily cover applied as required? Toke of Hagging intermediate cover adequate?	Yes No
Is	s intermediate cover adequate?	Yes No
	s grading of intermediate cover adequate to revent ponding of storm water?	Yes No
E	ividence of ponded water? need to pump	Yes_V No
E C I	ividence of ponded water? need to pump ponded water out ividence of Odors? from townside B Characteristics working face intensity	Yes V No Wet Rubbish smell
	Source Distance traveled	
	Evidence of erosion and/or daylighted refuse?	Yes_ No_
Storm W	/ater Drainage Controls:	
1 1 1	s site grading adequate to convey storm vater to drainage ditches?	Yes No
mofill 1	s site grading adequate to impede soil erosion?	Yes No_
Mo.	Are drainage ditches clear of debris and litter?	Yes No
m') red	- drainage channels ®PD → RI Gd basin overflowed	ubbish along length of
Light y	iota	Rubbish along draunas

	rsion structures in place to	and the second second	
prevent storm water run	on to refuse fill area?	Yes No	
Are culverts free of deb	ris to adequately	9	
convey storm water?	especially along	Yes_No	
If the answer to any question is to mitigate the situation.	no, please explain in detail a	Yes No drainage pipe neak f nd provide a scope and schedule	are
Maintenance Facility:			
Is the grading surroundi adequate to promote pos	ng the maintenance facility sitive drainage? Some low spots.	Yes No V water not draining Yes V No _ under town	
Are all solvents, oils, etc	properly stored?	Yes No_	
Is the facility and surrou	inding area in proper order	maer four	eed new
i.e. good housekeeping?	Rubbish;	Yes_No_V to	uqo
Is the diesel fuel facility		Yes_No_Yes_No_	
Surface Water Detention Basins	<u>u</u>		
Do the basins have at lea	ast two feet of freeboard?	Yes VNo_	
Are the detention basins	structurally sound?	Yes No	
Is all the piping to transport leaks and structural de		Yes V No	
Perimeter Observations:			
Evidence of liquid enter	ing or leaving	Yes No V	÷
the waste?		32137 <del>5</del> 537 <del>-4</del>	707
Size of affected area			
Flow rate			

Site Inspection Form (page 3 of 4)	Date 3-22-06
Evidence of Odors? Characteristics Intensity	Yes No
Source	
Distance traveled	
Evidence of erosion and/or daylighted refus	se? Yes V No
Receiving Water Observations:	Sec as.
(Surface water discharge points)	
Evidence of floating or suspended materials of waste origin?	yes No <u>✓</u>
Source	
Size of affected area	62
Evidence of discoloration and turbidity? Color	shighty turbid due to sediment
Source	0 J Rain
Size of affected area	
Evidence of Odors?	Yes No_X
Characteristics	
Intensity	
Source	
Distance traveled	
Evidence of beneficial use, water associated wildlife present?	d Yes No_X
Flow rate:	
Weather Conditions:	Rainy
Wind speed	1 '
(1= still or 0 mph, 2 = breezy or 1-25 mph,	3 + windy or 25 mph +)
Precipitation:	
Today	2.24 inches
Total 5 previous days	, 93 inches

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff? Yes No
- drawing e along scale house coming 19.07 flare see- If yes, please explain in detail and provide a scope and schedule to mitigate.  - base 6 bern ended into road - entrance to ash > gap > needs to be filled to flare
- Townside Road down to El sump croding.
4 pocks from upper wea stiding down
- Lownside road rubbish along length - liner exposed
- Need to dress up Tuesday's working face - exposed  frash (table too!)
pending at lowpoint of E2
, ,
- ponding on benches of front slope (3 major areas)
ponding @ Ash pronofill (1) highest bench
(a) low point east of 18 h france
= ponding @ ash leagnate 3 old work face (monday)
-ponding @ 10p07 (111 11
- LARGE pond Manka side cell 11
- ponding Coentrance to cell E2
part of fence down near maintenance shop.
- exosion of front beam from ash runoff (along channy)  - exosion into cod dedice need water to a fill up
-exerción intered dedia nego unto to an full un

Vdate=completed

### Storm Water Inspection 3-22-06 To Do List:

### PONDING WATER:

Makai side of MSW Cell E2

3-27-06

Entrance to MSW Cell E2 & mauka side of berm near E2 3-27-06

Ash Monofill: 1. highest bench

2. low point east of Ash frac tank 3-27-06

working face

Benches of front slope (3 major areas) 3-29-06

· Near ash leachate riser-dried out on

Top of MSW Cell 11—

Mauka side of Cell 11/3-28-06

### RUBBISH PICK UP:

Town side road on the way down to El Sump - rubbish along length of road 3-31-06

- Along entire length of haul road (in drainage ditch alongside gas header pipe) 412-00
- Waianae slope of MSW Cells 9-10 (near maintenance shop)

#### EROSION:

Entire town side slope - Liner exposed and torn at base of slope at road to E1 sump ✓ 4-3-06

Most of the ash Monofill has erosion on the slopes – areas where ash can be seen under intermediate cover √ 3-30-06

Front stability berm eroding from water flowing down ash area (2 major areas – near leachate riser and where the trench was dug to divert water into the sed basin Base of stability berm/main road

Town side road on the way down to E1 - rocks from upper areas sliding down

■ There's a big gap between the main haul road and the entrance to the ash V (John) 3-28-06

### OTHER:

Part of the chain fence that runs along the top of the drainage channel is down
 Need to dress up Tuesday's working face (town slope) – exposed trash ✓ 4-18-06

Godfellows

### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	4-27-06	
Inspector	Suzzun Pankenier	
Current Weat	ther Conditions Sunny; high C	Louds
Refuse Dispo	3 3	
160120500	1 12 155 44650	JUL 1921G
Work	ing face as small as possible?	Yes 🔀 No
Gradi	ng to prevent water run-on into refuse?	Yes × No
Daily	cover applied as required?	Yes × No
Is inte	rmediate cover adequate?	Yes X No
130,1000	ding of intermediate cover adequate to at ponding of storm water?	Yes × No
Evide	nce of ponded water?	Yes No×
Evide	nce of Odors?	Yes No ➤
	cteristics	
Intens	rity	550, 560 W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sourc		
Distar	nce traveled	
Evide	nce of erosion and/or daylighted refuse?	Yes No×
Storm Water	Drainage Controls:	
30.0	5-1 gg	9
	grading adequate to convey storm to drainage ditches?	Yes X_ No
Is site	grading adequate to impede soil erosion?	Yes X No x front face Yes X No _ release gradia
Are d	rainage ditches clear of debris and litter?	
	Some Windplown	Litter near bunkers

Are berms or other diversion structures in place to	
Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes No <u>×</u> _
0-10-01-	\$286.4.5.6 Philipping 200.0000000000000000000000000000000000
Dun OAre culverts free of debris to adequately	20 CF 2021
convey storm water?	Yes X No
If the answer to any question is no, please explain in detail an to mitigate the situation.	d provide a scope and schedule
Maintenance Facility:	
Is the grading surrounding the maintenance facility	
adequate to promote positive drainage?	Yes X No Scellast
Are all solvents, oils, etc. properly stored?	Yes × No Scellast Page Yes × No _
Is the facility and surrounding area in proper order	
i.e. good housekeeping?	Yes 🔀 No
Is the diesel fuel facility in good shape?	Yes X No
Surface Water Detention Basins: Goodfellow Bros. C Do the basins have at least two feet of freeboard?	tivesting water
a top of channel	due to tonstruction of
Do the basins have at least two feet of freeboard?	Yes X No _ west been
Are the detention basins structurally sound?	Yes X No
Is all the piping to transmit surface water free	Market - Elevandria (1993 ber
of leaks and structural defects?	Yes X No
Perimeter Observations:	
Evidence of liquid entering or leaving	Yes No×
the waste?	AVEAV A-A
Size of affected area	
Flow rate	
A POTT AMOU	and the second s

Cita	Inspection	Forms	Inana	2	OF AT
DILL	Hispection	LOUIS	Dage	4	U1 7)

# Date 4-27-06

Evidence of Odors?	Yes No×
Characteristics	10 mg
Intensity	
Source	
Distance traveled	
Evidence of erosion and/or daylighted refuse?	Yes <u>×</u> No
Receiving Water Observations:	CCII THE
(Surface water discharge points)	
Evidence of floating or suspended materials	Yes No_X
of waste origin?	
Source	
Size of affected area	
Evidence of discoloration and turbidity?	Yes No_X
Color	0.65.019
Source	(D) 10 10 10 10 10 10 10 10 10 10 10 10 10
Size of affected area	
Evidence of Odors?	Yes No×
Characteristics	
Intensity	
Source	
Distance traveled	
Evidence of beneficial use, water associated wildlife present?	Yes No_\(\sum_
Flow rate:	gpm
Weather Conditions:	
Wind speed	
(1= still or 0 mph, 2 = breezy or 1-25 mph, $3 + y$	windy or 25 mph +)
Precipitation:	
Today	0 inches
Total 5 previous days	① inches

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

Site Inspection Form (page 4 of 4)

Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff? Yes \_\_\_ No ×

If yes, please explain in detail and provide a scope and schedule to mitigate.

-top of cell 11 needs to be graded for proper
drainage (Moved to May inspeti in for complotion)

5-10-06 Perosion through-out ash monofill

5-10-06 Perosion on front face (fat area where I take
ash froto

need to clean sediment (water out of sed basin
publish -> WM has contracted
sood fell on pood needs to be covered

5-10-06 Pash pood needs to be covered

4-21-06 Publish near maintenance snop stope

Adainage channel

4-21-06 Publish etopoth pit

## Storm Water Inspection 3-22-06 To Do List:

Line

ACCOUNTS AND A CONTRACT OF A C
Chant Land and
PONDING WATER: MUSTYCH FED OUT) -X Makai side of MSW Cell E2
—X Makai side of MSW Cell E2
Entrance to MSW Cell E2 & mauka side of berm near E2
Ash Monofill: 1. highest bench
2. low point east of Ash frac tank
3. working face
Henches of front slope (3 major areas)
Near ash leachate riser
* Top of MSW Cell 11 4
Mauka side of Cell-top an wie throw some dirt over white some ? It is
I'm not sure what the White stuff is - smarthing -
RUBBISH PICK UP: that leached out & Is now dry.
<ul> <li>Town side road on the way down to El Sump – rubbish along length of road</li> </ul>
<ul> <li>Along entire length of haul road (in drainage ditch alongside gas header pipe)</li> </ul>
Waianae slope of MSW Cells 9-10 (near maintenance shop)
Rubbish in evoded area near gas well 2 to willy 4/20 L
Rubbish in evoded area near loss well of willish it
Entire town side slope - Liner exposed and term at base of slope at road to E1
sump-> liner covered but still exposed trash in evaled duea
Most of the ash Monofill has erosion on the slopes - areas where ash can be seen
ander intermediate cover 1/720/ TO DICK RUBBISH ALL OVER ASIA STAND
Front stability berm eroding from water flowing down ash area (2 major areas - inspection)
near leachate riser and where the trench was dug to divert water into the sed basin
Base of stability berm/main road
Town olds and a the series to
Thera's a his any between the main trait and the entrance to the ash C.
• Cell 11 appec - empled of some emporal tilla in
base near disamore disamost his them have the
OTHER: base near drainage channel (May inspection)
Part of the chain fence that runs along the top of the drainage channel is down Need to dress up Tuesday's working face (town slope) - exposed trashfowns ide slope)  PUSH ASH WICE ADAY - great job of the ash area back to
Need to dress up Tuesday's working face (town slope) - exposed trash(founs ide slope)
PUSH ASH TWICE ADAY - great job get the ash area back to
Sandbags on ash monofill-are we using them? homa Is there a better place for them? 4/17
Sandbags on ash monofill - are we using them,
TS thouse a better place for the 2 1 4/17
1 31 2 Trave a portor place for frem.
10 depicing & pard Day
10 Apiping & Ravidom soucrete
A Dialous in the state of the s
brown willy we was to pump water out of sa basin
Brantwally we need to pump water out of sed basin of clear out mud/dirt (part of May inspection)
Weame a read on 11 C.
Some exposed ash at base of ash pit, near Ash sump frac
Tank (needs to be covered) 4/20
* need to pick little off of front storres (mas wind home litter of)
MICCO to pick When of the storyer (back, wind blown littles of)
The state of the s

### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	5-31-06	
Inspector	S. PANKemicv	
Current W	Veather Conditions SWNNY; Clear; 51	ight breeze
Refuse Di	sposal Area:	
W	orking face as small as possible?	Yes 🔀 No
Gr	ading to prevent water run-on into refuse?	Yes⊻ No
Da	aily cover applied as required?	Yes 🔀 No
Is	intermediate cover adequate?	Yes 🔀 No
	grading of intermediate cover adequate to event ponding of storm water?	Yes K No
Ev	vidence of ponded water?	Yes No_ <u>×</u>
Ch Int So	ridence of Odors? naracteristics tensity nurce stance traveled	Yes_ No_X bbish Snell
Ev	vidence of erosion and/or daylighted refuse? + Stope	Yes No
Storm Wa	ater Drainage Controls:	
	site grading adequate to convey storm ater to drainage ditches?	Yes <u></u> No
Is	site grading adequate to impede soil erosion?	Yes <u>×</u> No
Aı	re drainage ditches clear of debris and litter?	Yes X No

Site	Inspection	Form !	mage 2	of 4)
OTCO.	mapoonon	T OTITE	(page 2	01 47

Date 5-31-06

Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?

Yes × No \_

Are culverts free of debris to adequately convey storm water?

Yes X No

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

### Maintenance Facility:

Is the grading surrounding the maintenance facility adequate to promote positive drainage?

Yes No ×

Are all solvents, oils, etc. properly stored?

Yes⊁ No

Is the facility and surrounding area in proper order

i.e. good housekeeping?

Yes X No

Is the diesel fuel facility in good shape? Mobile fauker Yes X No \_\_\_\_

### Surface Water Detention Basins:

Do the basins have at least two feet of freeboard?

Yes X No \_\_\_

Are the detention basins structurally sound?

Yes XNo\_

Is all the piping to transmit surface water free

of leaks and structural defects?

Yes Y No\_

### Perimeter Observations:

Evidence of liquid entering or leaving

Yes NoX

the waste?

Size of affected area

Flow rate

Site	Inspection	Form	(nage	3	of 4
will	THOUSE COLLORS	T COLUMN	Dage	4	OT -07

## Date 5-31-06

Evidence of Odors?	Yes No⊻_	
Characteristics		
Intensity		
Source		
Distance traveled	***	
Evidence of erosion and/or daylighted refuse?	Yes No×	
Receiving Water Observations:		
(Surface water discharge points)		
Evidence of floating or suspended materials of waste origin?	Yes No_X	
Source Size of affected area		
Evidence of discoloration and turbidity?	Yes No X	
Color		
Source	State of the state	
Size of affected area		
Evidence of Odors?	Yes No.	
Characteristics	700	
Intensity	12	
Source		
Distance traveled	-	
Evidence of beneficial use, water associated wildlife present?	Yes No_X	
Flow rate:	$\mathcal{D}_{\mathrm{gpm}}$	
Weather Conditions:	25 21	
Wind speed	1	
$(1=\text{still or }0\text{ mph}, 2=\text{breezy or }1-25\text{ mph}, 3+\frac{1}{2}$	windy or 25 mph +)	
Precipitation:		
Today	O inches	
Total 5 previous days	() inches	

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff?

Yes × No.\_

If yes, please explain in detail and provide a scope and schedule to mitigate.

-> clean out sed basin (see attached TO DO List)

> Determination oner from April 2006 Stormwater inspection = Grading of top of MSVV cell 11th Promote positive drainage of minimize ension

## Storm Water Inspection 5-31-06 To Do List:

RUBE	BISH PICK UP:
*	Waianae slope of MSW Cells 9-10-11 (near maintenance) at 10 6/12/04 360 Lets,  E and complete cere 11 400 400 400 160 160 160 160 160 160 160 160 160 1
EROS	SION:
€V.	Entire town side slope Most of the ash Monofill has erosion on the slopes - areas where ash can be seen under intermediate cover 6/15 - MARN / JOHN
•	Fill in gap between the main haul road and the entrance to the ash
×	Small area of erosion near flat part of front face (where ash pictures are taken)
	Waianae slopes of ash Monofill area has some erosion 6-16-06 John 45 of 1230 ph John St. 18 Sille work work  OR:
OTHE	Clean/scrap out sedimentation basin to be completed in July 2006
plue	OU SCORN & Complete C/14/oc John, BOB, MERL, SHOW
	and up AREA By Good Follow

Please initial and date items once completed.

### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	6-29-06	
Inspector	S. Pankenier	
Current We	ather Conditions <u>Sunny</u>	
Refuse Disp	posal Area:	
Wor	king face as small as possible?	Yes No_
Grad	ding to prevent water run-on into refuse?	Yes VNo
Dail	y cover applied as required?	Yes No_
Is in	termediate cover adequate?	Yes No _
070.00	rading of intermediate cover adequate to ent ponding of storm water?	Yes No_
Evic	lence of ponded water?	Yes No
Cha	lence of Odors? racteristics nsity	Yes_ No_
Sou: Dist	rce ance traveled	
Evic	dence of erosion and/or daylighted refuse?	Yes No_V
Storm Water	er Drainage Controls:	
	te grading adequate to convey storm er to drainage ditches?	Yes No
Is si	te grading adequate to impede soil erosion?	Yes No_
Are	drainage ditches clear of debris and litter?	Yes No

Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?

Yes No

Are culverts free of debris to adequately convey storm water?

Yes No

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

### Maintenance Facility:

Is the grading surrounding the maintenance facility adequate to promote positive drainage?

Yes No \_\_

Are all solvents, oils, etc. properly stored?

Yes No\_\_

Is the facility and surrounding area in proper order i.e. good housekeeping?

Yes No\_

Is the diesel fuel facility in good shape?

Yes No \_

### Surface Water Detention Basins:

Do the basins have at least two feet of freeboard?

es No

Are the detention basins structurally sound?

Yes No

Is all the piping to transmit surface water free of leaks and structural defects?

Yes No

### Perimeter Observations:

Evidence of liquid entering or leaving

the waste?

Size of affected area

Flow rate

Yes\_\_ No\_

Site Inspection Form (page 3 of 4)  Date	ie <u>6·29·06</u>	2
Evidence of Odors? Characteristics Intensity	Yes	s_ No_
Source		
Distance traveled		
Evidence of erosion and/or daylighted refuse?	Yes	s No
Receiving Water Observations:		
(Surface water discharge points) NA - NO 15		
Evidence of floating or suspended materials of waste origin?	Yes	No_
Source	1	12
Size of affected area		111111
Evidence of discoloration and turbidity?	Yes	No
Color	E-	
Source		
Size of affected area	N-74-0	
Evidence of Odors?	Yes	No
Characteristics		
Intensity		
Source		
Distance traveled		
Evidence of beneficial use, water associated wildlife present?	Yes	No_
Flow rate:	_(	2 gpm
Weather Conditions:	G.	
Wind speed	1	
(1=still or 0 mph, 2=breezy or 1-25 mph, 3+v	windy or 25 mg	oh +)

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

Precipitation:

Today Total 5 previous days

Date 6.29.06

### Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff? Yes \_\_\_\_ No \_\_\_

If yes, please explain in detail and provide a scope and schedule to mitigate.

### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	7-31-06	
Inspector	S. Pankenier	
Current We	ather ConditionsCWnY	
Refuse Disp	oosal Area:	
Wor	king face as small as possible? H-Power diversion today	Yes <u>×</u> No
Grad	ding to prevent water run-on into refuse?	Yes 🔀 No
Dail	y cover applied as required?	Yes X No
Is in	termediate cover adequate?	Yes X No
	rading of intermediate cover adequate to rent ponding of storm water?	Yes 📐 No
Evid	ience of ponded water?	Yes No×
	ience of Odors? racteristics	Yes No_X
Inter Sou	nsity	
0.000.000.000	ance traveled	
Evid	dence of erosion and/or daylighted refuse?	Yes No×
Storm Water	er Drainage Controls:	
	te grading adequate to convey storm er to drainage ditches?	Yes × No
Is si	te grading adequate to impede soil erosion?	Yes <u>×</u> No Yes <u>×</u> No
Are	drainage ditches clear of debris and litter?	Yes X No

	Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes X	. No
	Are culverts free of debris to adequately convey storm water?	Yes_×	No
	e answer to any question is no, please explain in detail and pre uitigate the situation.	ovide a sc	ope and schedule
Mai	ntenance Facility: (New I ocation)		
	Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes <u>×</u>	
	Are all solvents, oils, etc. properly stored?  SPCC inspection conducted 7-27-06	Yes <u>×</u>	No
	Is the facility and surrounding area in proper order i.e. good housekeeping?	Yes ×	No
	Is the diesel fuel facility in good shape?	Yes⊻_	No
Surf	ace Water Detention Basins:		
	Do the basins have at least two feet of freeboard?	Yes X	
	Are the detention basins structurally sound?	Yes X	No
	Is all the piping to transmit surface water free of leaks and structural defects?	Yes <u>X</u>	No
Peri	meter Observations:		
	Evidence of liquid entering or leaving the waste? Size of affected area	Yes	No_ <u>X</u>
	Flow rate		

## Date 7.31-06

Evidence of Odors?	Ye	s No×
Characteristics		
Intensity		
Source	1	
Distance traveled	-	
Evidence of erosion and/or daylighted refuse?	Ye	s No <u>×</u>
Receiving Water Observations:		
(Surface water discharge points) fxy		
Evidence of floating or suspended materials of waste origin?	Yes	No∑
Source Size of affected area		
Evidence of discoloration and turbidity? Color Source	Yes	No.×
Size of affected area		
Evidence of Odors?	Yes	No >
Characteristics	50 Tr	84000
Intensity		
Source		
Distance traveled		
Evidence of beneficial use, water associated wildlife present?	Yes	No×
Flow rate:		gpm
Weather Conditions:	t	
Wind speed		
$(1=\text{still} \text{ or } 0 \text{ mph}, 2=\text{breezy or } 1-25 \text{ mph}, 3+\sqrt{3}$	windy or 25 m	oh +)
Precipitation:	2	
Today	O inch	es
Total 5 previous days	10 inch	es

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

Site Inspection Form (page 4 of 4)

### Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff? Yes \_\_\_ No \_<

If yes, please explain in detail and provide a scope and schedule to mitigate.

### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	6-25-06	
Inspector	S. Pankenier	
Current Wea	ather Conditions Swmy; Slightwine	<del>2</del>
Refuse Disp	osal Area:	
Wor	king face as small as possible?	Yes X No
Grad	ling to prevent water run-on into refuse?	Yes X No
Dail	y cover applied as required?	Yes X No
Is in	termediate cover adequate?	Yes <u>X</u> No
	ading of intermediate cover adequate to ent ponding of storm water?	Yes X No
Evid	lence of ponded water?	Yes No_X
Char Inter Sour	lence of Odors? racteristics nsity ree ance traveled	Yes No×
	lence of erosion and/or daylighted refuse?	Yes No
Storm Water	er Drainage Controls:	
Is si wate	te grading adequate to convey storm or to drainage ditches? AWRA NEW BOHM OF EZ/E3 (along te grading adequate to impede soil erosion?	east side of troperty) -> May 1 -
Is si	te grading adequate to impede soil erosion?	Yes X No _ grading
	drainage ditches clear of debris and litter?  · Litter/Rubbish in dvainage charm bottom half (belov	Yes No X
	· Utter along length of draina	ge channel fence
	· some Rubbish at mouth of	corrugated pipes (base of

Are berms or other diversion structures in place to

prevent storm water run-on to refuse fill area?	Yes X No
Are culverts free of debris to adequately convey storm water?	Yes No 🔀
If the answer to any question is no, please explain in detail and p to mitigate the situation.	provide a scope and schedule
Maintenance Facility:	
Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes 🔀 No
Are all solvents, oils, etc. properly stored?	Yes X No
Is the facility and surrounding area in proper order i.e. good housekeeping?	Yes 🗶 No
Is the diesel fuel facility in good shape? Received 8/10	/o6 Yes X No
Surface Water Detention Basins: , basin needs to be clear	aned out (started before
Do the basins have at least two feet of freeboard?	Yes × No_ Hower
Are the detention basins structurally sound?	Yes X_ No
Is all the piping to transmit surface water free of leaks and structural defects? — Channel Mouth  Perimeter Observations:	Yes X No
Perimeter Observations:	ed out
Evidence of liquid entering or leaving the waste?	Yes No_X
Size of affected area Flow rate	

Site Inspection Form (page 3 of 4)	ate 8-28-06
Evidence of Odors?	Yes NoX
Characteristics	The state of the s
Intensity	No.
Source	
Distance traveled	
Evidence of erosion and/or daylighted refuse?	Yes No_
Receiving Water Observations:	A VO DE JEDE DAVIES DE N
Receiving Water Observations: (Surface water discharge points) Struct o metal  Evidence of floating or suspended materials of waste origin? Source Size of affected area	ls & Ke Olina outfalls)
Evidence of floating or suspended materials	Yes No×
of waste origin?	- housewar area now sed hasin
Source	needs lillewicker
Size of affected area	- Notas attor protect
Evidence of discoloration and turbidity? Color	Yes No_>
Source	TAXABLE TAXABL
Size of affected area	
Evidence of Odors?	Yes No ★
Characteristics	1000
Intensity	
Source	2
Distance traveled	U <del>me</del>
Evidence of beneficial use, water associated wildlife present?	Yes No_
Flow rate:	O gpm
Weather Conditions:	
Wind speed	2
(1=still  or  0  mph,  2=breezy or  1-25  mph,  3+	windy or 25 mph +)

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

O inches

Precipitation:

Today Total 5 previous days Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff?

YesX No

If yes, please explain in detail and provide a scope and schedule to mitigate.

4. top of E2 needs to be graded for proper run-off

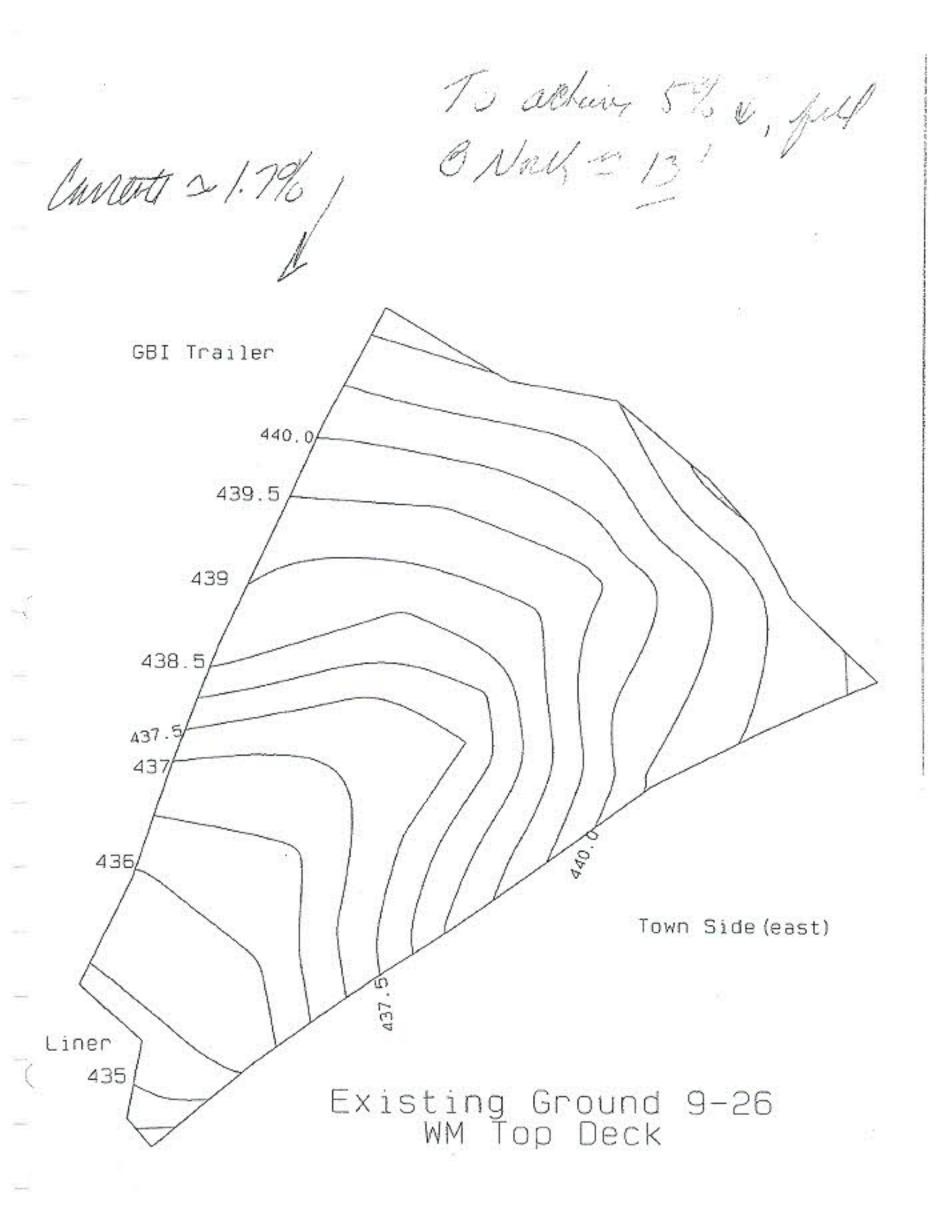
· need to kepair/Replace force trations
along arainage channel

Doofferlows to kepair offer
initial west beach construction

## August Storm Water Inspection 8-25-06 To Do List:

GRADI	<u> </u>		71.	2% grade	o
	Top of MSW Cell E2	grade for proper wa	ter run-off)	attached .	sheet) mz
* comples	enaspen B	rice of 7-0	e which w	van is Pri	par ran-ott.
RUBBI	SH PICK UP:	- which w	ay you we	ant the wa	sheet noff? for ranoff? tor to go?
	Area around sedimen outfalls 7/14/0	tation basin & toward	ls Farrington (nea	ar sampling	Swnite crownite the top
• 0	Litter/rubbish in lowe	er portion of drainage	channel 915	sp R.Y.	the TI
• )	Litter along the lengt	h of the drainage cha			
	Windblown litter nea	r/below bunker slope	1/2/07 bit	-/	
=	Some rubbish at the roase of the west bern	mouth of the corrugat	ed pipes in the dr	ainage channel (a	t the
EROSI	ON:				
	Slight erosion on the on the right side, before	front slope of the MS ore gas well 7)	W (if you're going)	ng up the haul roa	d, its
OTHE	₹:				
	Clean out sedimentat basinSICOLA	ion basin & mouth of	drainage channe	l that leads to the -06 vnbloted 8	P
	A 10 10 70 10 10 10 10 10 10 10 10 10 10 10 10 10	e fence that runs alor		Vi 12	1
(	channel	X	\		
Š	39-19-No-2 ite	m would to s	ite facility	inspection	n sheet
51	(D	M & Check Li	st) & good	fellows to R	n Sheet sepair a portion on well
(AS	of 9.30.06				an well
Co	whaching God	odfellow	8		
	Bkos to kepa	nk fênce			
	you completi	betini 9 00			

Please initial and date items once completed.



#### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

Date	9-29-06	197
Inspector	Suzan Pankenier	
THE TRUE WAS TURN	ther Conditions Sunny ; hot ; cla	ear_skys
Refuse Dispo	3 A B	
Work	ing face as small as possible?	Yes X No
Gradi	ng to prevent water run-on into refuse?	Yes K No
Daily	cover applied as required?	Yes No_
Is inte	ermediate cover adequate?	Yes 🔀 No
	ding of intermediate cover adequate to nt ponding of storm water?	Yes × No
Evide	ence of ponded water?	Yes No_
Chara	ence of Odors?	Yes No_X
Intens Sourc	· ( ) 하다	
	nce traveled	
Evide	ence of erosion and/or daylighted refuse?	Yes No X
Storm Water	Drainage Controls:	
	grading adequate to convey storm to drainage ditches?	Yes No <u>×</u>
/ Is site	e grading adequate to impede soil erosion?	Yes Ko_
	brainage ditches clear of debris and litter?	Yes 🔀 No
JA GUS-	t side of property — Goodfellor Currently to be used trainage (see side of swate side of site castern drain	ws is working on Eastern
ockpiles	to be used drainage (see	tructed on earther
P constru	side of site	. 36" pipes will carry

# Date 9-29-06

Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?

Yes × No \_

Are culverts free of debris to adequately convey storm water?

 $_{
m Yes}$  imes  $_{
m No}$ 

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

#### Maintenance Facility:

Is the grading surrounding the maintenance facility adequate to promote positive drainage?

Yes 🗶 No \_\_\_

Are all solvents, oils, etc. properly stored?

Yes X No \_\_\_

Is the facility and surrounding area in proper order i.e. good housekeeping?

Yes X No\_\_

Is the diesel fuel facility in good shape?

Yes X No \_\_

### Surface Water Detention Basins:

Do the basins have at least two feet of freeboard?

Yes No\_\_

Are the detention basins structurally sound?

Yes Y No \_\_

Is all the piping to transmit surface water free of leaks and structural defects?

# Perimeter Observations:

Evidence of liquid entering or leaving

the waste?

Size of affected area

Flow rate

Site Inspection Form (page	ge 3	of 4)
----------------------------	------	-------

# Date 9-29-06

Evidence of Odors?	Yes	NoX
Characteristics		-
Intensity	27.200	- 1/1/20 IT 7/1/20
Source		
Distance traveled		
Evidence of erosion and/or daylighted refuse?	Yes	No <u>X</u>
Receiving Water Observations:		
(Surface water discharge points)		
Evidence of floating or suspended materials of waste origin?	Yes	$No$ $\underline{\times}$
Source Size of affected area		
Evidence of discoloration and turbidity?	Yes	NoX
Color	0	
Source		
Size of affected area	1 manual 1	
Evidence of Odors?	Yes	No X
Characteristics	100 A - 1000	
Intensity		
Source		
Distance traveled		
Evidence of beneficial use, water associated wildlife present?	Yes	No_K
Flow rate:	_C	gpm
Weather Conditions:	- 1	
Wind speed		<u> </u>
(1=still or  0  mph, 2=breezy or  1-25  mph, 3+	windy or 25 mp	h +)
Precipitation:		
Today	O inche	s
Total 5 previous days	O inche	S

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff? Yes \_\_\_ No \_\_\_

If yes, please explain in detail and provide a scope and schedule to mitigate.

Note: Sed basin was cleaned out by Goodfellow Brothers (completed 9-6-06) - approximately 2500 cy. To date, subdrains have been completed & a Rock bern has been installed in the bottom to help with desilting. The Risers are stacked and all grading work has been completed.

Upcoming construction includes installation of trash grates & grouting of the risers.

Notified DOH CWB of construction activities on 9-27-06.

Also, a wet weather pad is going to be prepared by operations (as part of followup to DOH inspection.

wetweather 10/10/06 8P
pad constructed as:

#### WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION PREVENTION PLAN SITE INSPECTION FORM

I	Date/0-/9-06	
I	Date	
(	Current Weather Conditions Sumy; no Rain!	
<u>F</u>	Refuse Disposal Area:	
	Working face as small as possible?	Yes × No
	Grading to prevent water run-on into refuse?	Yes <u>×</u> No
	Daily cover applied as required?	Yes K No
	Is intermediate cover adequate?	Yes × No
106	Is grading of intermediate cover adequate to prevent ponding of storm water? East side	Yes No <u>×</u>
(	Evidence of ponded water?  Ly NE postion cell 10/11 - where	Yes_X No
	Evidence of ponded water?  A NE postion cell 10/11 - where Evidence of Odors?  Characteristics  Intensity	YesNo_K_
	Source	
	Distance traveled	
	Evidence of erosion and/or daylighted refuse?	Yes No_X
<u>\$</u>	Storm Water Drainage Controls:	
	Is site grading adequate to convey storm water to drainage ditches?	Yes <u>K</u> No
need to	Is site grading adequate to impede soil erosion?	Yes No <u>×</u>
wrect gradi MSW Cell 10 MSW Cell 11	Are drainage ditches clear of debris and litter?  — ERDSION along Channel  near ash monefill	Yes X No

Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes × No
prevent storm water run-on to refuse fill area?  Are culverts free of debris to adequately convey storm water?  Man Tunt of gravel (from west beam) if the answer to any question is no, please explain in detail to mitigate the situation.  Maintenance Facility:	Yes X No in Channel @South enol → minor and provide a scope and schedule / 2-will scrapeoud if it increases 4 affects flow (for future su)
Maintenance Facility:	executs)
Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes <u>×</u> No
Are all solvents, oils, etc. properly stored?	Yes X No
Is the facility and surrounding area in proper order i.e. good housekeeping?  Is the diesel fuel facility in good shape?	Yes K No
Surface Water Detention Basins:	
Do the basins have at least two feet of freeboard?	Yes X No
Are the detention basins structurally sound?	Yes K No
Is all the piping to transmit surface water free of leaks and structural defects?	Yes X No
Perimeter Observations:	
Evidence of liquid entering or leaving the waste? Size of affected area	YesNo_X
Flow rate	A 304

# Date 10-19-06

F:1 (01 0	Y N. X
Evidence of Odors?	Yes No_X
Characteristics	(4
Intensity	
Source	
Distance traveled	
Evidence of crosion and/or daylighted refuse?	Yes_X No
Receiving Water Observations: (2) ALONG	taul roads (4C)
(Surface water discharge points) 3 East & W	taul ROAD (4C) JUST Stoped of MSW cells 10 \$ []
Evidence of floating or suspended materials	Yes No≪
of waste origin?	55-55 E-15
Source	
Size of affected area	
Evidence of discoloration and turbidity?	Yes No×
Color	105
Source	WALL STREET
Size of affected area	
Evidence of Odors?	Yes No×
Characteristics	105
Intensity	
Source	
Distance traveled	
Dill Charles and	Y N V
Evidence of beneficial use, water associated wildlife present?	Yes No_X
Flow rate:	O gpm
Weather Conditions:	ą.
Wind speed	t .
(1= still or 0 mph, 2 = breezy or 1-25 mph, 3 +	windy or 25 mph +)
Precipitation:	
Today	1.41 inches
Total 5 previous days	nches inches

If the answer to any question is no, please explain in detail and provide a scope and schedule to mitigate the situation.

#### Other:

Are there any other conditions at the landfill and surrounding area which potentially could negatively impact the quality of the storm water runoff? Yes \_\_\_ No ×

If yes, please explain in detail and provide a scope and schedule to mitigate.

SUMMARY of Inspection

| EROSION AREAS |:
| \*Along lower portion of drainage channel
| \*ASH Monofill—

O down slope cells 5,6,7,8

Odirectly below haul road (ASH 4,5)

O cell 3 (cast) - slight erosion

O cell 9 front slope (at for -> fractank)

\* MSW

Offont face (4B)

O East side cell ET & EZ (Slight) EDOSION REELS

(3) west side 4A /4C (along haus road)

O front slope of ET

[ PONDING : O est & west slopes MSW 10, 11

O top (west-side) of West stability bern

O cell E3

O tast side cell 11

\* TARP on slope of MSW cell 6 pulled slightly open (about 3-4ft)
Lishould Realign of faster back together

\* fix ditch along lower poretion of haul Road

\* MSW cell 10/11/9 - need to correct grading for good SW drawing of

\* Rework backside of MSW cell B- consist (prevent ponding)

\* fix erosion along concrete drainage channel (ASHAPEA)

## 10-19-06 Storm Water Inspection Follow-Up Checklist

## Fix Erosion Areas:

	ASH
	Along lower portion of drainage channel - drainage ditch cut 11-24-06 PK
	Directly below haul road - cells 4, 5 11-23-06 24.
	Cell 3 - slight erosion 10/301016 PK
	Cell 8 - front slope (at ash toe - near ash frac tank) 10-20-06 Pt
	Cells 5, 6 (area that we recovered right before it rained) / 10-∂-1-06 PK
	MSW
	Front face (cell 4B & E1) (0 ~ 27-06 PK
	Erosion reels on east side of cells E1 & E2 _ 11/2/0 /00
	West Side of Cells 4A/4C \(\(\cell \) 01 00 \(\cell \)
	East & west slopes of Cells 10, 11 10 10 60 70 70 70 70 70 70 70 70 70 70 70 70 70
	Re-work backside of Cell E2 – erosion cuts/reels d\(\frac{3000}{3000}\)
	On the way down to the west stability berm \(\lambda \) \(\lambda
20	onding:
	Top of west stability berm (eastside - below haul road) 10 19 00 - 50 V DA
	Northeast side of Cell 10 10/19/06 MM
	Bottom of Cell E3 10/20/66 (2)
	East side of Cell 11 10/20/010 50
25	andom;
	Tarp on slope of MSW Cell 6 pulled slightly open (about 3-4 feet); should realign &
	fasten back together 10/24/04 Tel
	MSW cell 9, 10, 11 - need to correct grading for good storm water drainage (we
	need to prevent ponding)/ 10-27-06 PK
	Fix ditch along lower portion of haul road (adjacent to ash Monofill) 11/14/06
	•
	C. Alalana Cina in Mira
	Goodfellows filling in this area
	10-23-06
	10-25-06 -10-28-06 -> Regranded &
	Godfan - was
	reafferlows working on area

#### WAIMANALO GULCH SANITARY LANDFILL - SITE INSPECTION FORM STORM WATER POLLUTION PREVENTION PLAN SURFACE WATER MANAGEMENT PLAN

	Date: 11-30-04 Inspector: SUZAM	ankenier
	Current Weather Conditions: SWWW, Not Win	
REF	USE DISPOSAL AREA:	)
22	Working face as small as possible?	Yes × No_
	Grading to prevent water run-on into refuse?	Yes X No
	Daily cover applied as required?	Yes × No
	Is intermediate cover adequate?	Yes × No
	Is grading of intermediate cover adequate to prevent ponding of storm water?	Yes × No
	Evidence of ponded water?	Yes No
	Evidence of Odors?	Yes No×
	Characteristics Intensity Source Distance traveled	
	Evidence of crosion and/or daylighted refuse?	YesNoX_
STO	RM WATER DRAINAGE CONTROLS:	
رعرف	Is site grading adequate to convey storm water to drainage ditches?	Yes XNo
d	Is site grading adequate to impede soil erosion?	Yes X No X . EZ /E1 Yes X No Y . IO /11
9	Are drainage ditches clear of debris and litter?	Yes X No 10/11
610	Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes X No
	Are culverts free of debris to adequately convey storm water?	Yes X No
If the	answer to any question is no, please explain in detail on last page and pro schedule to mitigate the situation.	vvide a scope and
MAI	NTENANCE FACILITY:	
	Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes — No
	Are all solvents, oils, etc. properly stored?	Yes X No
	Is the facility and surrounding area in proper order (i.e. good housekeeping)?  Is the area around the mobile fuel trucks in good shape (i.e. no spills)?	Yes No X reads to Yes No _ be Decovered

If the answer to any question is no, please explain in detail on last page and provide a scope and schedule to mitigate the situation.

SURFACE WATER DETENTION BASINS:	
Do the basins have at least two feet of freeboard?	Yes 🔀 No
Is the sedimentation basin structurally sound?	Yes Z No
Is all the piping to transmit surface water free of leaks and structural defects?	Yes <u></u> No
If the answer to any question is no, please explain in detail on last page an schedule to mitigate the situation.	d provide a scope and
PERIMETER OBSERVATIONS:	
Evidence of liquid entering or leaving the waste? Size of affected area Flow rate	Yes Nox
Evidence of Odors? Characteristics Intensity Source Distance traveled	YesNo_
Evidence of erosion and/or daylighted refuse?	Yes No_X
(Surface water discharge points = outfalls between sedimentation basin and Evidence of floating or suspended materials of waste origin?  Source Size of affected area	l Farrington Highway) YesNo <u></u> X
Evidence of discoloration and turbidity?  Color  Source  Size of affected area	YesNo <u>×</u>
Evidence of Odors?  Characteristics Intensity Source ' Distance traveled	YesNoX_
Evidence of beneficial use, water associated wildlife present?  Flow rate:	YesNo_≾ _Ogpm
Weather Conditions:  Wind speed  (1= still or 0 mph, 2 = breezy or 1-25 mph, 3 + windy or 2.	2 <sub>mph</sub> 5 mph +)
Precipitation: Today Total S previous days	O inches

#### OTHER:

Are there any other conditions at the landfill or surrounding area that potentially could negatively impact the quality of the storm water runoff?

Yes \_ No X

If yes, please explain below in detail and provide a scope and schedule to mitigate.

erosion usw 10/11
· erosion usw EZ/ET
· frackwalk shope below Louings
· erosion on Ash cells 7/8
· exposed fuff near Maint. shop

#### 11-30-06 Storm Water Inspection Follow-Up Checklist

	osion Areas:		_
AS	H	1 1	1.01/
•	Down slope of cells 7,8 _	12/10	1000

Front face E1 12/7/06 P.K.
 East side of cells E1 & E2 12-17/06 P.K.
 West slope of cells 10/11
 Slope below lounge needs to be track walked 42/1/10

#### Random:

South of maintenance shop area — exposed auto fluff—needs to be covered.

 12/1/06 SP

Completed Pight after My inspedien.

#### WAIMANALO GULCH SANITARY LANDFILL - SITE INSPECTION FORM STORM WATER POLLUTION PREVENTION PLAN SURFACE WATER MANAGEMENT PLAN

Date: 29 December 06 Inspector: David Furan  Current Weather Conditions: PAIN	
Current weather Collabors.	
REFUSE DISPOSAL AREA:	- 12
Working face as small as possible?	Yes V No _
Grading to prevent water run-on into refuse?	Yes V No
Daily cover applied as required?	Yes V No _
Is intermediate cover adequate?	Yes Vo_
Is grading of intermediate cover adequate to prevent ponding of storm water?	Yes 🗸 No _
Evidence of ponded water?	Yes_ No ✓
Evidence of Odors?	Yes No ✓
Characteristics Intensity Source Distance traveled	
Evidence of erosion and/or daylighted refuse?	Yes No V
STORM WATER DRAINAGE CONTROLS:	
Is site grading adequate to convey storm water to drainage ditches?	Yes V No
Is site grading adequate to impede soil erosion?	Yes V No
Are drainage ditches clear of debris and litter?	Yes V No
Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes ✓ No
Are culverts free of debris to adequately convey storm water?	Yes ✓ No
If the answer to any question is no, please explain in detail on last page and pro schedule to mitigate the situation.	rvide a scope and
MAINTENANCE FACILITY:	
Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes Vo No
Are all solvents, oils, etc. properly stored?	Yes ✓ No
Is the facility and surrounding area in proper order (i.e. good housekeeping)?	
Is the area around the mobile fuel trucks in good shape (i.e. no spills)?	Yes V No No
If the answer to any question is no, please explain in detail on last page and pro schedule to mitigate the situation.	Example Control of the Control

SURFACE WATER DETENTION BASINS:	19
Do the basins have at least two feet of freeboard?	Yes No
Is the sedimentation basin structurally sound?	Yes 🗹 No
Is all the piping to transmit surface water free of leaks and structural defects?	Yes 🗸 No
If the answer to any question is no, please explain in detail on last page and schedule to mitigate the situation.	d provide a scope and
PERIMETER OBSERVATIONS:	come.
Evidence of liquid entering or leaving the waste? Size of affected area Flow rate	Yes No_
Evidence of Odors? Characteristics Intensity Source Distance traveled	Yes No
Evidence of erosion and/or daylighted refuse?	Yes No_
RECEIVING WATER OBSERVATIONS:  (Surface water discharge points = outfalls between sedimentation basin and Evidence of floating or suspended materials of waste origin?  Source  Size of affected area	Farrington Highway) YesNo_✓
Evidence of discoloration and turbidity?  Color  Source  Size of affected area	YesNo_
Evidence of Odors? Characteristics Intensity Source Distance traveled	YesNo_✓
Evidence of beneficial use, water associated wildlife present? Flow rate:	YesNo Ogpm
Weather Conditions: Wind speed (1= still or 0 mph, 2 = breezy or 1-25 mph, 3 + windy or 2.)	
Precipitation: Today Total 5 previous days	25 inches

#### OTHER:

Are there any other conditions at the landfill or surrounding area that potentially could negatively impact the quality of the storm water runoff?

Yes \_\_ No \_\_

If yes, please explain below in detail and provide a scope and schedule to mitigate.

Note: Weatherstation perconded

0.25 inches Rain on

12/20/05, day of impection,
however sed basin did not

fill up - therefore no
enough
flowwas
observed.

#### WAIMANALO GULCH SANITARY LANDFILL - SITE INSPECTION FORM STORM WATER POLLUTION PREVENTION PLAN SURFACE WATER MANAGEMENT PLAN

Date: 1-25-07 Inspector: S. Panken	Lep
Current Weather Conditions: Sunm	
REFUSE DISPOSAL AREA:	
Working face as small as possible?	Yes X No
Grading to prevent water run-on into refuse?	Yes X No _
Daily cover applied as required?	Yes X No
Is intermediate cover adequate?	Yes XNo
Is grading of intermediate cover adequate to prevent ponding of storm water?	Yes No <u>×</u>
Evidence of ponded water?	Yes No_X
Evidence of Odors?	Yes No_X
Characteristics Intensity Source Distance traveled	
Evidence of erosion and/or daylighted refuse?	YesNo_X
STORM WATER DRAINAGE CONTROLS:	
Is site grading adequate to convey storm water to drainage ditches?	Yes X No
Is site grading adequate to impede soil erosion? Eleartslope	Yes No ×
Are drainage ditches clear of debris and litter?	Yes No 🔀
Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes X No
Are culverts free of debris to adequately convey storm water?  RECK RUSOSU GENERAL PARTY  If the answer to any question is no, please explain in detail on last page and pro schedule to mitigate the situation.	
MAINTENANCE FACILITY:	
Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes 🔀 No
Are all solvents, oils, etc. properly stored?	Yes 🔀 No
Is the facility and surrounding area in proper order (i.e. good housekeeping)?	Yes X No _
Is the area around the mobile fuel trucks in good shape (i.e. no spills)?	Yes 🔀 No
If the answer to any question is no, please explain in detail on last page and pro schedule to mitigate the situation.	wide a scope and

SURFACE WATER DETENTION BASINS:	
Do the basins have at least two feet of freeboard?	Yes X No
Is the sedimentation basin structurally sound?	Yes X No
Is all the piping to transmit surface water free of leaks and structural defects?	Yes X No
If the answer to any question is no, please explain in detail on last page an schedule to mitigate the situation.	nd provide a scope and
PERIMETER OBSERVATIONS:	
Evidence of liquid entering or leaving the waste? Size of affected area Flow rate	Yes No×
Evidence of Odors? Characteristics Intensity	Yes No_X
Source Distance traveled	
Evidence of erosion and/or daylighted refuse?	Yes No_
RECEIVING WATER OBSERVATIONS:  (Surface water discharge points = outfalls between sedimentation basin and	- 13 B 13 B 13 B
Evidence of floating or suspended materials of waste origin?  Source  Size of affected area	Yes NoX_
Evidence of discoloration and turbidity?  Color  Source  Size of affected area	Yes No_X
Evidence of Odors?  Characteristics Intensity Source Distance traveled	YesNoX_
Evidence of beneficial use, water associated wildlife present?  Flow rate:	YesNoX
Weather Conditions: Wind speed (1= still or 0 mph, 2 = breezy or 1-25 mph, 3 + windy or 2	mph
Precipitation: Today Total 5 previous days	O inches

-	-		-	-	
O'	1.1	31	6	12	٠
3.5				r.	

Are there any other conditions at the landfill or surrounding area that potentially could negatively impact the quality of the storm water runoff?

Yes \_\_\_ No X

If wes, please explain below in detail and provide a scope and schedule to mitigate.

SUMMARY FX It's:

\* EROSION: East slope of MSW (andfill (EI, EZ)

- 3 Bottom front MSW Cell EI (above flat appea)
- @ Front Slope MSW Cell 1 (around gas pipe)

\*\* Noted a Small area of ponding on MSW GII ED approx 4 x 4 feet. Will show to Ops. fliscuss action

TO DOX3

- O Scrap out top portion of dearnage channel sediman has collected / cleanout Rubbish in channel @ month
- @ MSW Cell 9 -> publish pickup
- (3) Minore fragging front Flat EI
  - @ Rubbish around gas well 1

## 1-25-07 STORM WATER INSPECTION FOLLOW-UP CHECKLIST

(SEE ATTACHED MAP FOR CLARIFICATION OF AREAS TO BE MITIGATED)

FD	(EROSION AREAS:
•	DOWN SLOPE OF ASH CELLS 6,7,8 . 1/201/07 Pt
۰	DOWN SLOPE OF ASH CELLS 6,7,8 429/07 Pt EAST SIDE OF MSW CELLS E1 & EXTERES prepped & ready to be REShaped as
٠	BOTTOM LIFT OF THE FRONT SLOPE OF MSW CELL E1 (DIRECTLY ABOVE FLAT AREA) OPS TO
•	FRONT SLOPE OF MSW CELL1 (AREA AROUND GAS PIPE THAT GOES UP THE HILL) - PLEASE TRY TO DRESS THIS UP A BIT & POSSIBLY TRACK-WALK IT OR FLATTEN IT OUT 1 24 07 PT
Po	NDING:
•	SMALL AREA MSW CELL E2 1/29 07 PK
R/	NDOM:
•	PICK RUBBISH AROUND GAS WELL 1 129/07 PK
۰	CLEAN UP FRONT FLAT AREA OF MSW CELL E1 (FLAGGING /RUBBISH)
٥	CLEAN UP RUBBISH/DEBRIS AT TOP OF DRAINAGE CHANNEL (CONCRETE AREA WHERE THE TWO CORRUGATED PIPES ARE)
•	PICK UP RUBBISH ON MSW CELL 9 (NEAR ROCK CRUSHERS) - AROUND THE OLD METAL LITTER FENCES 12-6/07 PV
۰	CLEAN OUT TOP OF DRAINAGE CHANNEL SEDIMENT HAS COLLECTED THAT WASHED DOWN FROM SLOPES OF MSW CELLS 7 & 8 M DVED TO TELO. INSPECTION

#### WAIMANALO GULCH SANITARY LANDFILL - SITE INSPECTION FORM STORM WATER POLLUTION PREVENTION PLAN SURFACE WATER MANAGEMENT PLAN

Date: 2-20-07 Inspector: O Parke	nier
Current Weather Conditions: 5 unny; no wind	
REFUSE DISPOSAL AREA:	
Working face as small as possible?	Yes≯ No_
Grading to prevent water run-on into refuse?	Yes × No
Daily cover applied as required?	Yes X No_
Is intermediate cover adequate?	Yes <u>&gt; No</u> _
Is grading of intermediate cover adequate to prevent ponding of storm water?	Yes≯ No
Evidence of ponded water?	Yes No×
Evidence of Odors?	Yes No
Characteristics Intensity Source Distance traveled	
Evidence of erosion and/or daylighted refuse?	Yes No X
STORM WATER DRAINAGE CONTROLS:	
Is site grading adequate to convey storm water to drainage ditches?	Yes × No
Is site grading adequate to impede soil erosion?	Yes × No
Are drainage ditches clear of debris and litter?	Yes _ No x (see bac
Are berms or other diversion structures in place to prevent storm water run-on to refuse fill area?	Yes X No
Are culverts free of debris to adequately convey storm water?	Yes X No
If the answer to any question is no, please explain in detail on last page and pro- schedule to mitigate the situation.	A COUNTY OF THE PARTY OF THE PA
MAINTENANCE FACILITY:	
Is the grading surrounding the maintenance facility adequate to promote positive drainage?	Yes X No
Are all solvents, oils, etc. properly stored?	Yes X No
Is the facility and surrounding area in proper order (i.e. good housekeeping)?	Yes X No _
Is the area around the mobile fuel trucks in good shape (i.e. no spills)?	Yes X No
If the answer to any question is no, please explain in detail on last page and pro schedule to mitigate the situation.	

SURFACE WATER DETENTION BASINS:	
Do the basins have at least two feet of freeboard?	Yes 🔀 No
Is the sedimentation basin structurally sound?	Yes 🗶 No
Is all the piping to transmit surface water free of leaks and structural defects?	Yes 🚣 No
If the answer to any question is no, please explain in detail on last page and schedule to mitigate the situation.	d provide a scope and
PERIMETER OBSERVATIONS:	
Evidence of liquid entering or leaving the waste? Size of affected area Flow rate	Yes No≰_
Evidence of Odors? Characteristics Intensity Source Distance traveled	YesNo
Evidence of erosion and/or daylighted refuse?	Yes No_
RECEIVING WATER OBSERVATIONS:  (Surface water discharge points = outfalls between sedimentation basin and Evidence of floating or suspended materials of waste origin?  Source  Size of affected area	Farrington Highway) YesNo⊀_
Evidence of discoloration and turbidity?  Color  Source  Size of affected area	YesNo
Evidence of Odors? Characteristics Intensity Source Distance traveled	YesNoX_
Evidence of beneficial use, water associated wildlife present?  Flow rate:	YesNo★_ O_gpm
Weather Conditions:  Wind speed  (1= still or 0 mph, 2 = breezy or 1-25 mph, 3 = windy or >	
Precipitation: Today Total 5 previous days	O inches

#### OTHER:

Are there any other conditions at the landfill or surrounding area that potentially could negatively impact the quality of the storm water runoff?

Yes \_\_ No <

If yes, please explain below in detail and provide a scope and schedule to mitigate.

TO DO:

+ pickup Rubbish @ ash monofill (Waianae side) near

\* Minor exosion a front Slope of MSW cell 1 Lovekall, little to no prosion noted -> culverts, new Swales of down drains helped minimize ferminate exosion

\* Litter & front entrance of WGSL (along tappington)temp labores cleaning up NOW -> \$ inmedian. All wearing proper PDE.

# liter couldn't inferce of concrete dearnage channel

# piping / Minor amount of wind blown litter around

ash riser pipe (leachaste sump)

# 2-26-07 STORM WATER INSPECTION FOLLOW-UP CHECKLIST

FI	X EROSION AREAS:
	FRONT SLOPE OF MSW CELL 1 PK 3-24-07
•	SMOOTH OUT AREA AROUND THE SHOP & AROUND THE GAS WELL BEHIND THE
R/	ANDOM:
٠	PICK RUBBISH AROUND ASH LEACHATE SUMP 2K3 14-107
•	PICKUP RUBBISH (PIPES/DEBRIS) ON ASH MONOFILL NEAR DRAINAGE CHANNEL
•	PICK UP RUBBISH AT FRONT GATE (LANDFILL ENTRANCE) 2000 1 6
۰	PICK UP RUBBISH ALONG DRAINAGE CHANNEL (BAGS CAUGHT IN FENCE NEAR ASH)
۰	CLEAN OUT TOP OF DRAINAGE CHANNEL - SEDIMENT HAS COLLECTED THAT WASHED DOWN FROM SLOPES OF MSW CELLS 7 & 8 MOVED / EXTENDED TO MARCH INSPECTION
•	PULL ROCKS OUT OF TOP OF DRAINAGE CHANNEL (BIG BOULDER IN THE LEFT TEM - SEE MARCH PIPE) Goodfellow Bras. Completed 3-29-07/Ep) NOTE.
0	PICK UP LITTER AROUND THE SHOP 3 27 07 PK

Attachment H Update Log Example

# UPDATE LOG WAIMANALO GULCH SANITARY LANDFILL STORM WATER POLLUTION CONTROL PLAN

ANTICIPATED DATE	DESCRIPTION OF UPDATE	NAME/SIGNATURE OF RESPONSIBLE OFFICIAL

Attachment I Correspondence

# **Record of Conversation**

	Charge no. 92114	Date 01/09/07	Time 7:45 am
Earth Tech employee: Michelle Mason		Telephone call	
Other participants	Organization	Telephone no.	
Subject: Current storm event and status of	f sampling		
(1) Alec Wong - DOH CWB at 586-4	1309		
him know we mobbed out yesterday a the concrete channel into the first cell filtrated into the second cell and the ri light showers were expected in the are Barbers Point with light rains slightly Question now is – do we have to wait We discussed and agreed that it would though it would not be preceded by 72	of the detention pond. Rain then stop sers remained dry. Called off sample a. Called the NWS again this morning inland.  for 72 hours of dry weather even the be okay to go ahead and sample the	pped and was intermittent all do effort at 7:30 pm after the NV ng at 7:00 am and the reported ough the detention pond never of discharge for the annual requi	lay. No water ever VS indicated only clear skies at discharged?
this would be much more representative year's event)	ve than a sample collected well after		te. We agreed that
			te. We agreed that
			te. We agreed that
			te. We agreed that
			te. We agreed that
year's event)			te. We agreed that

#### Brown, Fredricka

From:

Mason, Michelle

Sent:

Tuesday, January 09, 2007 8:21 AM

To:

Pankenier, Suzan; Pettit, Eddie

Cc:

Boyle, Ron; Brown, Fredricka; Lottig, Justin

Subject:

Status of Storm Water Sampling at WGLF

Importance: High

Attachments: tel log - DOH CWB) 010907.DOC

#### Hi Suzan/Eddie-

I wanted to give you a heads up on the storm water sampling at WGLF. Yesterday it started raining heavy so we mobbed Dricka out to the site. When she got there, there was water coming down the channel into the first cell of the detention pond (we were very excited thinking that this was going to be it!). However, the rain/showers became intermittent throughout the afternoon/evening and after checking the radar and calling the NWS who indicated only light showers throughout the night, we called it at 7:30 pm last night. I checked with the NWS again at 7:00 am this morning who reported that Barber's Point was reporting clear skies with some light showers slightly inland. They indicated the highest chance of rain would be this afternoon.

I called DOH CWB to discuss (see attached record of conversation). CWB agreed that we do not need 72 hours of dry weather since there was no discharge. Ron indicated that due to the lag time for the water to percolate and get into the subdrains that are connected to the outflow pipes, there may still be a chance that some water will trickle out.

Therefore, the plan is to send Dricka out there this morning to check on the discharge. If dry (which we expect but really want to confirm), she will come back in as Justin is due to spend the afternoon out there. Justin will grab the sample if there is enough rain for discharge.

Hope this sounds good to you both. If you'd like to discuss, I am here (808-356-5322).

Thanks and have a great day! Michelle